

STIC Database Tracking Number: 331866

To: AHMED FARAH
Location: RND-7A71
Art Unit: 3769
Thursday, May 20, 2010

Case Serial Number: 10/764311

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Search Notes

Examiner FARAH:

Attached are the following search results from your application request. If you have any questions please feel free to contact me.

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EIC 3700
SEARCH REQUEST

331866

Today's Date _____

RUSH

Name A. Farah

Priority App. Filing Date 1/23/2004

AU/Org. 3769 Examiner # 77541

Case/App. # 10/764,311

Bld.&Rm.# 7A71 Phone 2-4765

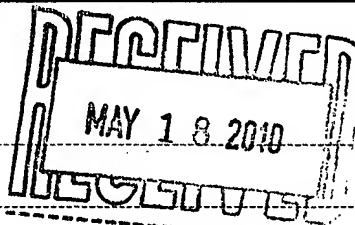
Format for Search Results

EMAIL ☒

PAPER ☒

If this is a Board of Appeals case, check here ☐

Synonyms _____



Describe this invention in your own words. Method for cutting/abating (making an incision/excision) in the lens of the eye, wherein at least two cuts are made simultaneously with optical energy. The cut surface has an area of between 1-10mm².

Terms to avoid corneal cut/ablation.

Additional Comments

Cuts/incisions are made in the crystalline lens of the eye, not the cornea (see claim 30).
Also, check a control program adapted to produce cut surfaces in the crystalline lens of the eye (see claim 43).

Please submit completed form to your EIC.

SPE Signature here indicates Rush

[Signature]

STIC USE ONLY

01/09

Searcher _____

Date Completed _____

Phone _____

Sources _____

INVENTORS

? ds

Set	Items	Description
S1	218	AU=LUBATSCHOWSKI H?
S2	390	AU=LUBATSCHOWSKI, H?
S3	60	AU=RIPKEN T?
S4	69	AU=RIPKEN, T?
S5	59	AU=OBERHEIDE U?
S6	90	AU=OBERHEIDE, U?
S7	655	S1:S6
S8	32	S7 AND (INCISION? OR EXCISION?)
S9	26	S8 AND LASER?
S10	15	RD (unique items)
S11	1	S7 AND (SURGICAL?())LASER?)

? t s10/3,k/1-15

Dialog eLink: [Order File History](#)

10/3,K/1 (Item 1 from file: 350)

DIALOG(R)File 350: Derwent WPIX

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0016687569 *Drawing available*

WPI Acc no: 2007-402652/200738

XRPX Acc No: N2007-302454

Refractive surgical treatment method for performing primary cut for opening up cornea involves producing succession of laser pulses with energy less than laser pulse energy required to produce material division or cutting

Patent Assignee: SIE SURGICAL INSTR ENG AG (SIES-N)

Inventor: LUBATSCHOWSKI H; RATHJEN C

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20070055221	A1	20070308	US 2005207776	A	20050822	200738	B

Priority Applications (no., kind, date): US 2005207776 A 20050822

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
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...surgical treatment method for performing primary cut for opening up cornea involves producing succession of laser pulses with energy less than laser pulse energy required to produce material division or cutting Original Titles: Apparatus for and method of refractive surgery with laser pulses Inventor: LUBATSCHOWSKI H... **Alerting Abstract** ...NOVELTY - The laser pulse energy of an individual laser pulse of succession of laser pulses is less than the laser pulse energy that is required for producing material division with isolated laser pulse in the region irradiated with individual laser pulse of the succession of laser pulses. The laser pulse energy is reduced by reducing the laser pulse intensity and/or laser pulse duration. ...is increased by effecting the first cut in the cornea of eye with the pulsed laser and also for other incisions in the cornea. Obtains reduction in the unwanted mechanical and thermal influence by virtue of overlap at the same time that the laser pulse energy of each individual laser pulse is reduced by spacing the laser pulses from each other as far as possible in respect of time and space to separate the thermal influence of each individual laser pulse from subsequent laser pulse... ...diagram illustrating the relationship between the pulse energy to be introduced for material division and laser pulse repetition frequency. **Title Terms** .../Index Terms/Additional Words: LASER; **Class Codes** Original Publication Data by Authority Argentina **Publication No.** Inventor name & address: Lubatschowski, Holger... **Original Abstracts:** A method and apparatus for a refractive surgical treatment that uses a laser which produces a succession of laser pulses applied to a material region. The laser pulses irradiates the material region to be divided where the energy of the individual pulse... **Claims:** 1. A method of refractive surgical treatment, in which a succession of laser pulses is produced and a material region to be treated is irradiated with the succession of laser pulses, characterised in that the laser pulse energy of an individual laser pulse of the succession of laser pulses is less than the laser pulse energy which is required for producing material division with an isolated laser pulse in the region irradiated with the individual laser pulse of the succession of laser pulses.

Dialog eLink: **USPTO Full Text Retrieval Options**

10/3,K/2 (Item 1 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

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32891767 **PMID:** 20108193

[fs-Lentotomy: presbyopia reversal by generating gliding planes inside the crystalline lens]

Lentotomie mittels fs-Laserpulsen: Behandlung der Presbyopie durch Erzeugen von Gleitebenen in der Linse.

Lubatschowski H; Schumacher S; Wegener A; Fromm M; **Oberheide U;** Hoffmann H; Gerten G

Biomedical Optics, LZH, Hannover. h.lubatschowski@lzh.de
Klinische Monatsblätter für Augenheilkunde (Germany) Dec 2009, 226 (12) p984-90
, ISSN: 1439-3999--Electronic 0023-2165--Linking **Journal Code:** 0014133
Publishing Model Print-Electronic

Document type: English Abstract; Journal Article

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Lentotomie mittels fs-**Laserpuls**en: Behandlung der Presbyopie durch Erzeugen von Gleitebenen in der Linse.

Lubatschowski H; Schumacher S; Wegener A; Fromm M; **Oberheide U**; Hoffmann H; Gerten G

...flexibility of the lens has been realised by utilising the non-linear interaction of ultrafast **laser** pulses with transparent tissue, the so-called photodisruption. This process has been used to create micro- **incisions** which act as gliding planes inside the crystalline lens without opening the eye globe. This... ..not induce an increasing opacification (cataract) over a six-month follow-up period. However, the **incisions** were still detectable using Scheimpflug imaging and histopathological techniques, although the visibility of the **incisions** was declining. Furthermore, no side effects were observed during the wound healing process and during... (

Descriptors: ***Laser** Therapy--methods--MT; *Lens, Crystalline--surgery--SU;
*Ophthalmologic Surgical Procedures--methods--MT; *Presbyopia--surgery--SU

Dialog eLink: **USPTO Full Text Retrieval Options**

10/3,K/3 (Item 2 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

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18952605 **PMID:** 19044246

In vivo application and imaging of intralenticular femtosecond laser pulses for the restoration of accommodation.

Schumacher Silvia; Fromm Michael; **Oberheide Uwe**; Gerten Georg; Wegener Alfred;

Lubatschowski Holger

Laser Zentrum Hannover eV, Hannover, Germany. S.Schumacher@lzh.de

Journal of refractive surgery (Thorofare, N.J. - 1995) (United States) Nov 2008 , 24 (9) p991-5 , ISSN: 1081-597X--Print 1081-597X--Linking **Journal Code:** 9505927

Publishing Model Print

Document type: Journal Article; Research Support, Non-U.S. Gov't

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

In vivo application and imaging of intralenticular femtosecond laser pulses for the restoration of accommodation.

Schumacher Silvia; Fromm Michael; **Oberheide Uwe**; Gerten Georg; Wegener Alfred;
Lubatschowski Holger

...One concept for regaining the elasticity of the sclerosing lens is intralenticular treatment by femtosecond **laser** pulses. **METHODS:** The feasibility of applying and imaging in vivo microincisions by femtosecond **laser** pulses was evaluated in five rabbit lenses with a new high repetition rate (100 kHz) femtosecond **laser** unit. The treated eyes were monitored using optical coherence tomography (OCT) and Scheimpflug imaging for localizing and studying the tissue effects of the **incisions**. The rabbits were investigated preoperatively, immediately postoperatively, and 14 days after treatment. **RESULTS:** The procedure, termed femtosecond-lentotomy, was successfully applied to the left lens of each rabbit. The **laser** microincisions within the crystalline lens were detectable with OCT and Scheimpflug imaging, which emphasizes the... characterizing postoperative tissue effects. The imaging within the lens showed a progressive fading of the **incisional** opacities generated by the femtosecond **laser** after 14 days with no detectable cataract formation. **CONCLUSIONS:** It is possible to create microincisions... day follow-up did not show undesirable side effects, such as cataract formation, after intralenticular **laser** treatment. (

Descriptors: *Accommodation, Ocular; ***Laser** Therapy--methods--MT; *Lens, Crystalline--surgery--SU

Very
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article

Dialog eLink: **USPTO Full Text Retrieval Options**

10/3,K/4 (Item 3 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

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15903188 **PMID:** 15088194

[Bone ablation using ultrashort laser pulses. A new technique for middle ear surgery]

Knochenablation mittels ultrakurzer **Laserpulse**. Eine neue Technik für die Mittelohrchirurgie.

Schwab B; Hagner D; Muller W; **Lubatschowski H**; Lenarz Th; Heermann R
HNO-Klinik der Medizinischen Hochschule Hannover. schwab.burkard@mh-hannover.de

Laryngo- rhino- otologie (Germany) Apr 2004 , 83 (4) p219-25 , **ISSN:** 0935-8943--
Print 0935-8943--Linking **Journal Code:** 8912371

Publishing Model Print

Document type: English Abstract; Journal Article

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

[Bone ablation using ultrashort laser pulses. A new technique for middle ear surgery]

Knochenablation mittels ultrakurzer **Laserpulse**. Eine neue Technik für die

Mittelohrchirurgie.

Schwab B; Hagner D; Muller W; **Lubatschowski H**; Lenarz Th; Heermann R

OBJECTIVES: **Laser** applications within the tympanic cavity area are widely accepted. Commonly used systems are CO(2)... The disadvantages are heat development and/or acoustic load of the inner ear. A new **laser** with ultra short pulses was examined concerning its ablation characteristics and tested for possible applications... tympanic cavity. **METHODS:** Investigations on human ossicles and porcine compacta were performed with a femtosecond **laser** in order to determine the ablation parameters. This included measurements of the dependency of the... that the threshold energy has a lower level than the threshold energy of the conventional **laser** systems. At a pulse duration of 180 fs the smallest fluence, with which an erosion... duration, less thermal damage is induced to the surrounding bone tissue as compared to conventional **laser** systems. The analysis of the scanning electron microscope demonstrates the extreme precision of this **laser** system. The achieved accuracy of the **incisions** and drillings ranges in the microm-area. **CONCLUSIONS:** The fs **laser** represents a new surgical tool for middle ear surgery. It works efficiently and in a... advantage in the handling of bony structures is to be expected in relation to other **laser** systems. Apart from the perforation of the stapes footplate, in particular the handling and modelling... (

Descriptors: *Bone and Bones--surgery--SU; *Ear Ossicles--surgery--SU; ***Laser** Therapy--instrumentation--IS; *Stapes Surgery--instrumentation--IS

Dialog eLink: **USPTO Full Text Retrieval Options**

10/3,K/5 (Item 4 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

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14376565 **PMID:** 11490739

[Optimizing laser parameters for intrastromal incision with ultra-short laser pulses]

Optimierung der **Laserparameter** für die intrastromale Schnittführung mittels ultrakurzer **Laserpulse**.

Heisterkamp A; **Ripken T**; Lutkefels E; Drommer W; **Lubatschowski H**; Welling H; Ertmer W

Laser Zentrum Hannover, Hollerithallee 8, 30419 Hannover. ah@lzh.de

Der Ophthalmologe - Zeitschrift der Deutschen Ophthalmologischen Gesellschaft (Germany) Jul 2001, 98 (7) p623-8, **ISSN:** 0941-293X--Print 0941-293X--Linking

Journal Code: 9206148

Publishing Model Print

Document type: English Abstract; Journal Article; Research Support, Non-U.S. Gov't

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

[Optimizing laser parameters for intrastromal incision with ultra-short laser pulses]

Optimierung der **Laserparameter** für die intrastromale Schnittführung mittels

translation

ultrakurzer **Laserpulse**.

Heisterkamp A; **Ripken T**; Lutkefels E; Drommer W; **Lubatschowski H**; Welling H; Ertmer W

BACKGROUND: With the assistance of ultrashort **laser** pulses (ca. 200 fs pulse duration) it is possible to perform precise **incisions** inside the corneal stroma with a width of a few microns. The advantage of ultrashort... ..This method of intrastromal photodisruption allows a very well defined deposition of energy within the **laser** focus inside the corneal stroma, accompanied by minimal collateral damage. **METHODS:** The possibilities of performing intrastromal cuts using fs-**laser** pulses at a wavelength of 780 nm and pulse durations of 200 fs were studied using a titanium-sapphire **laser** system. The treated tissue samples were analysed by light and scanning electron microscopy to determine **incision** quality, reproducibility and achievable accuracy. The mechanical side effects of fs-photodisruption inside the surrounding... ..very low and comparable to the effects during excimer treatment. Therefore an application of ultrashort **laser** pulses in refractive surgery appears to be a feasible alternative. (

Descriptors: *Corneal Stroma--surgery--SU; *Keratomileusis, **Laser In Situ** --instrumentation--IS

Dialog eLink: **USPTO Full Text Retrieval Options**

10/3,K/6 (Item 5 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

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10725779 **PMID:** 8490304

[Photoablation of the cornea with pulsed 2790 nm ErCr:YSGG laser irradiation. Basic studies]

Zur Photoablation der Hornhaut mit gepulster 2790 nm ErCr:YSGG- **Laserstrahlung**.
Grundlegende Untersuchungen.

Lubatschowski H; Kermani O; Asshauer T

Institut für Angewandte Physik, Universität Bonn.

Der Ophthalmologe - Zeitschrift der Deutschen Ophthalmologischen Gesellschaft (GERMANY) Apr 1993, 90 (2) p183-90, **ISSN:** 0941-293X--Print 0941-293X--

Linking **Journal Code:** 9206148

Publishing Model Print

Document type: English Abstract; Journal Article

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

[Photoablation of the cornea with pulsed 2790 nm ErCr:YSGG laser irradiation. Basic studies]

Zur Photoablation der Hornhaut mit gepulster 2790 nm ErCr:YSGG- **Laserstrahlung**.
Grundlegende Untersuchungen.

Lubatschowski H; Kermani O; Asshauer T

The potential of 3 microns solid-state **lasers** as an alternative to excimer **lasers** for photoablative corneal surgery was investigated. A Q-switched ErCr:YSGG **laser** (2790 nm, 200 ns) was used for irradiation of porcine corneas and agar-agar samples. Mechanical tissue effects (stroma, endothelium) were documented by micromorphology. **Laser**-induced shock-waves were analyzed by piezo-electric transducers. No sharp ablation threshold, as in excimer **laser** photoablation, could be determined. Energy fluences < 2 J/cm² led to dehydration of the irradiated... the organic matrix. At high fluences, the ablation rate exceeds the absorption depth of the **laser** radiation (up to 25 microns/pulse). At fluences between 2.5 and 28 J/cm²... thermal necrosis zone adjacent to the crater was 7 +/- 3 microns. The intensity of the **laser**-induced acoustic shock waves can peak to some hundred bar. Small gas bubbles up to... pressed between the collagen lamellas by the explosive force of the ablative process. In deep excisions (> 75%) endothelial defects underneath the beam axis could be documented. Large-area tissue ablation, with... necessary in myopia correction, will not be possible with the present generation of ErCr:YSGG **lasers**. Its high ablation rate makes this **laser** suitable as a cutting (astigmatism, keratoplasty, vitreous surgery) and drilling (glaucoma) device. (**Descriptors:** *Cornea--surgery--SU; *Lasers; *Light Coagulation--instrumentation --IS

Dialog eLink: **USPTO Full Text Retrieval Options**

10/3,K/7 (Item 1 from file: 5)

DIALOG(R)File 5: Biosis Previews(R)

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11881592 Biosis No.: 199396046008

Basic studies on photoablation of the cornea with pulsed 2790 nm ErCr: YSGG laser

Author: Lubatschowski H; Kremani O; Asshauer T

Author Address: Inst. Angewandte Physik, der Univ. Wegelerstrasse 8, W-5300 Bonn, germany** germany

Journal: Ophthalmologie 90 (2): p 183-190 1993

ISSN: 0941-293X

Document Type: Article

Record Type: Abstract

Language: German

Basic studies on photoablation of the cornea with pulsed 2790 nm ErCr: YSGG laser

Author: Lubatschowski H...

Abstract: The potential of 3 mu-m solid-state **lasers** as an alternative to excimer **lasers** for photoablative corneal surgery was investigated. A Q-switched ErCr:YSGG **laser** (2790 nm, 200 ns) was used for irradiation of porcine corneas and agar-agar samples. Mechanical tissue effects (stroma, endothelium) were documented by micromorphology. **Laser**-induced shockwaves were analyzed by piezo-electric transducers. No sharp

ablation threshold, as in excimer **laser** photoablation, could be determined. Energy fluences $lt 2 \text{ J/cm}^2$ led to dehydration of... the organic matrix. At high fluences, the ablation rate exceeds the absorption depth of the **laser** radiation (up to $25 \text{ } \mu\text{m/pulse}$). At fluences between 2.5 and 28 J... necrosis zone adjacent to the crater was $7 \pm 3 \text{ } \mu\text{m}$. The intensity of the **laser**-induced acoustic shock waves can peak to some hundred bar. Small gas bubbles up to... pressed between the collagen lamellas by the explosive force of the ablative process. In deep **excisions** ($gt 75\%$) endothelial defects underneath the beam axis could be documented. Large-area tissue ablation... necessary in myopia correction, will not be possible with the present generation of ErCr:YSGG **lasers**. Its high ablation rate makes this **laser** suitable as a cutting (astigmatism, keratoplasty, vitreous surgery) and drilling (glaucoma) device.

Dialog eLink: **USPTO Full Text Retrieval Options**

10/3,K/8 (Item 1 from file: 972)

DIALOG(R)File 972: EMBASE

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0083456678 **EMBASE/MEDLINE No:** 2009645087

Visualization of femtosecond laser pulse-induced microincisions inside crystalline lens tissue

Stachs O.; Schumacher S.; Hovakimyan M.; Fromm M.; Heisterkamp A.;
Lubatschowski H.; Guthoff R.

Department of Ophthalmology (Stachs, Hovakimyan, Guthoff), University of Rostock, Rostock, Laser Zentrum Hannover e.V. (Schumacher, Fromm, Heisterkamp, Lubatschowski), Hannover, Germany

Author email: oliver.stachs@med.uni-rostock.de

Corresp. Author/Affil: Stachs O.: Department of Ophthalmology (Stachs, Hovakimyan, Guthoff), University of Rostock, Rostock, Laser Zentrum Hannover e.V. (Schumacher, Fromm, Heisterkamp, Lubatschowski), Hannover, Germany

Corresp. Author Email: oliver.stachs@med.uni-rostock.de

Journal of Cataract and Refractive Surgery (J. Cataract Refractive Surg.) (United States) November 1, 2009 , 35/11 (1979-1983)

CODEN: JCSUE **ISSN:** 0886-3350

Publisher Item Identifier: S0886335009007482

Item Identifier (DOI): [10.1016/j.jcrs.2009.06.019](https://doi.org/10.1016/j.jcrs.2009.06.019)

Document Type: Journal ; Article **Record Type:** Abstract

Language: English **Summary language:** English

Number of References: 17

Visualization of femtosecond laser pulse-induced microincisions inside crystalline lens tissue

...Lubatschowski H

ordered

Purpose: To evaluate a new method for visualizing femtosecond **laser** pulse-induced microincisions inside crystalline lens tissue. Setting: **Laser Zentrum Hannover e.V.**, Hannover, Germany. Method: Lenses removed from porcine eyes were modified ex vivo by femtosecond **laser** pulses (wavelength 1040 nm, pulse duration 306 femtoseconds, pulse energy 1.0 to 2.5... ..repetition rate 100 kHz) to create defined planes at which lens fibers separate. The femtosecond **laser** pulses were delivered by a 3-dimension (3-D) scanning unit and transmitted by focusing optics (numerical aperture 0.18) into the lens tissue. Lens fiber orientation and femtosecond **laser**-induced microincisions were examined using a confocal **laser** scanning microscope (CLSM) based on a Rostock Cornea Module attached to a Heidelberg Retina Tomograph... ..scanning location. Microincision visualization showed different cutting effects depending on pulse energy of the femtosecond **laser**. The effects ranged from altered tissue-scattering properties with all fibers intact to definite fiber... ..extensive microbubble generation. Conclusions: The 3-D CLSM method permitted visualization and analysis of femtosecond **laser** pulse-induced microincisions inside crystalline lens tissue. Thus, 3-D CLSM may help optimize femtosecond **laser**-based procedures in the treatment of presbyopia. (c) 2009 ASCRS and ESCRS.

Medical Descriptors:

* **incision**; *lens; *lens fiber

animal experiment; animal tissue; article; clinical evaluation; computer program; confocal **laser** microscopy; controlled study; ex vivo study; Germany; nonhuman; priority journal; pulse rate; spectral sensitivity; three...

Orig. Descriptors:

Dialog eLink: **USPTO Full Text Retrieval Options**

10/3,K/9 (Item 2 from file: 972)

DIALOG(R)File 972: EMBASE

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0082390461 **EMBASE/MEDLINE No:** 2008225225

fs-Laser induced elasticity changes to improve presbyopic lens accommodation

Ripken T.; Oberheide U.; Fromm M.; Schumacher S.; Gerten G.; Lubatschowski H.

Laser Zentrum Hannover e.V., Hollerithallee 8, Hannover 30419, Germany

Author email: t.ripken@lzh.de

Corresp. Author/Affil: **Ripken T.:** Laser Zentrum Hannover e.V., Hollerithallee 8, Hannover 30419, Germany

Corresp. Author Email: t.ripken@lzh.de

Graefe's Archive for Clinical and Experimental Ophthalmology (Graefe's Arch. Clin. Exp. Ophthalmol.) (Germany) June 1, 2008 , 246/6 (897-906)

CODEN: GACOD **ISSN:** 0721-832X

Item Identifier (DOI): 10.1007/s00417-007-0699-x

Document Type: Journal ; Article **Record Type:** Abstract

Language: English **Summary language:** English

Handwritten note: "Very good" with a checkmark.

Handwritten note: "Date is good"

Handwritten note: "Good" with a checkmark.

Handwritten note: "Post priority date" with an arrow pointing to the DOI.

Number of References: 25

fs-Laser induced elasticity changes to improve presbyopic lens accommodation

Ripken T... ..Oberheide U... ..Lubatschowski H.

Corresp. Author/Affil: Ripken T.: Laser Zentrum Hannover e.V., Hollerithallee 8, Hannover 30419...

Corresp. Author Email:

...tissue to achieve gliding planes. Methods: For the preparation of the microincisions, near-infrared femtosecond **laser** pulses are used, generating **laser**-induced optical breakdowns. Different cutting patterns were performed, and the elasticity regain of the lenses... ..tissue shows very good results in terms of increasing the deformation-ability. The optimization of **laser** parameters leads to a minimally invasive surgery with no remarkable side effects like residual gas...

Device Brand Name: Bright Laser/Thales/France

Device Manufacturer:

Medical Descriptors:

* **laser** surgery; *presbyopia--etiology--et; *presbyopia--surgery--su . accommodation; animal tissue; article; ciliary muscle; controlled study; elasticity; ex vivo study; **incision**; lens capsule; minimally invasive surgery; nonhuman; pathogenesis; priority journal; sclerosis; swine

Orig. Descriptors:

Dialog eLink:

USPTO Full Text Retrieval Options

10/3,K/10 (Item 3 from file: 972)

DIALOG(R)File 972: EMBASE

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0078668599 **EMBASE/MEDLINE No:** 2001274928

Optimisation of the laser parameters for intrastromal incisions using ultrashort laser pulses

Optimierung der **laserparameter** für die intrastromale schnittführung mittels ultrakurzer **laserpulse**

Heisterkamp A.; **Ripken T.**; Lutkefles E.; Drommer W.; **Lubatschowski H.**; Welling H.; Ertmer W.

Laser Zentrum Hannover E.V.

Corresp. Author/Affil: Heisterkamp A.: Laser Zentrum Hannover, Hollerithallee 8, 30419 Hannover, Germany

Corresp. Author Email: ah@lzh.de

Ophthalmologe (Ophthalmologe) (Germany) August 20, 2001 , 98/7 (623-628)

CODEN: OHTHE **ISSN:** 0941-293X

Item Identifier (DOI): 10.1007/s003470170097

Document Type: Journal ; Article **Record Type:** Abstract

Language: German **Summary language:** English; German

Number of References: 15

Optimisation of the laser parameters for intrastromal incisions using ultrashort laser pulses

Optimierung der **laserparameter** für die intrastromale schnittführung
mittels ultrakurzer **laserpulse**

Issue Title:

...Ripken T... ...Lubatschowski H

Background: With the assistance of ultrashort **laser** pulses (ca. 200 fs pulse duration) it is possible to perform precise **incisions** inside the corneal stroma with a width of a few microns. The advantage of ultrashort... This method of intrastromal photodisruption allows a very well defined deposition of energy within the **laser** focus inside the corneal stroma, accompanied by minimal collateral damage. Methods: The possibilities of performing intrastromal cuts using fs-**laser** pulses at a wavelength of 780 nm and pulse durations of 200 fs were studied using a titanium-sapphire **laser** system. The treated tissue samples were analysed by light and scanning electron microscopy to determine **incision** quality, reproducibility and achievable accuracy. The mechanical side effects of fs-photodisruption inside the surrounding... very low and comparable to the effects during excimer treatment. Therefore an application of ultrashort **laser** pulses in refractive surgery appears to be a feasible alternative.

Medical Descriptors:

*

article; cornea stroma; human; **laser** surgery; surgical technique;
treatment outcome

Orig. Descriptors:

Dialog eLink:

USPTO Full Text Retrieval Options

10/3,K/11 (Item 1 from file: 2)

DIALOG(R)File 2: INSPEC

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12270937

Title: Visualizing of fs laser pulse induced micro-incisions inside crystalline lens tissue

Author(s): Stachs, O.; Schumacher, S.; Kroger, M.; Hoffmann, H.; Fromm, M.; Heisterkamp, A.; Lubatschowski, H.; Guthoff, R.F.

Author Email Address: oliver.stachs@uni-rostock.de

Author Affiliation: Dept. of Ophthalmology, Univ. of Rostock, Rostock, Germany;
Laser Zentrum Hannover e.V., Hannover, Germany

Journal: Proceedings of the SPIE - The International Society for Optical Engineering ,
vol.7550 , pp.75500U (7 pp.)

Publisher: SPIE - The International Society for Optical Engineering

Country of Publication: USA

Publication Date: 2010

Conference Title: Ophthalmic Technologies XX

Conference Date: 23 Jan. 2010

Conference Location: San Francisco, CA, USA

ISSN: 0277-786X

CODEN: PSISDG

U.S. Copyright Clearance Center Code: 1605-7422/10/\$18.00

Item Identifier (DOI): [10.1117/12.841584](https://doi.org/10.1117/12.841584)

Language: English

Subfile(s): A (Physics); B (Electrical & Electronic Engineering); C (Computing & Control Engineering)

INSPEC Update Issue: 2010-019

Copyright: 2010, The Institution of Engineering and Technology

Title: **Visualizing of fs laser pulse induced micro-incisions inside crystalline lens tissue**

Author(s): Stachs, O.; Schumacher, S.; Kroger, M.; Hoffmann, H.; Fromm, M.; Heisterkamp, A.; **Lubatschowski, H.**; Guthoff, R.F.

Abstract: The aim was to evaluate a method for visualizing fs **laser** pulse induced microincisions inside crystalline lens tissue. Porcine lenses were modified ex vivo by fs **laser** pulses to create defined planes at which lens fibers separate. Lens fiber orientation and fs **laser** -induced micro-**incisions** were examined using a confocal **laser** scanning microscope. Micro-**incision** visualization revealed different cutting effects depending on fs **laser** pulse energy, ranging from altered tissue scattering properties with all fibers intact to definite fiber separation with a wide gap. CLSM permits visualization and analysis and thereby control of fs **laser** pulse induced microincisions inside crystalline lens tissue.

Descriptors: biological tissues; biomedical optical imaging; image reconstruction; **laser** applications in medicine; lenses; medical image processing; optical microscopy

Identifiers: crystalline lens tissue; porcine lens; lens fiber orientation; confocal **laser** scanning microscopy; fs **laser** pulse induced microincisions visualization; cutting effects; tissue scattering properties

Dialog eLink: **USPTO Full Text Retrieval Options**

10/3,K/12 (Item 2 from file: 2)

DIALOG(R)File 2: INSPEC

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11824406

Title: **Dynamic and interaction of fs-laser induced cavitation bubbles for analyzing the cutting effect**

Author(s): Tinne, N.; Schumacher, S.; Nuzzo, V.; **Ripken, T.**; **Lubatschowski, H.**

Author Affiliation: Laser Zentrum Hannover e.V., Hannover, Germany

Journal: Proceedings of the SPIE - The International Society for Optical Engineering , vol.7373 , pp.73730L (9 pp.)

Publisher: SPIE - The International Society for Optical Engineering

Country of Publication: USA

Publication Date: 2009

Conference Title: Therapeutic Laser Applications and Laser-Tissue Interactions IV

Conference Date: 17-18 June 2009

Conference Location: Munich, Germany

ISSN: 0277-786X

CODEN: PSISDG

U.S. Copyright Clearance Center Code: 1605-7422/09/\$18.00

Item Identifier (DOI): [10.1117/12.831896](https://doi.org/10.1117/12.831896)

Language: English

Subfile(s): A (Physics); B (Electrical & Electronic Engineering)

INSPEC Update Issue: 2009-035

Copyright: 2009, The Institution of Engineering and Technology

Title: **Dynamic and interaction of fs-laser induced cavitation bubbles for analyzing the cutting effect**

Author(s): Tinne, N.; Schumacher, S.; Nuzzo, V.; **Ripken, T.; Lubatschowski, H.**

Abstract: A prominent **laser** based treatment in ophthalmology is the LASIK procedure which nowadays includes a cutting of the corneal tissue based on ultra short pulses. Focusing an ultra short **laser** pulse below the surface of biological tissue an optical breakdown is caused and hence a dissection is obtained. The **laser** energy of the **laser** pulses is absorbed by nonlinear processes. As a result a cavitation bubble expands and ruptures the tissue. Hence positioning of several optical breakdowns side by side generates an **incision**. Due to a reduction of the duration of the treatment the current development of ultra short **laser** systems points to higher repetition rates in the range of hundreds of KHz or even... ..breakdowns and respectively cavitation bubbles of adjacent optical breakdowns. While the interaction of one single **laser** pulse with biological tissue is analyzed reasonably well experimentally and theoretically, the interaction of several... ..the dynamic and interaction of two cavitation bubbles by using high speed photography. The applied **laser** pulse energy, the energy ratio and the spot distance between different cavitation bubbles were varied... ..seems to be inevitable to comprehend and optimize the cutting effect of ultra short pulse **laser** systems with high (> 1 MHz) repetition rates.

Descriptors: biological tissues; bubbles; cavitation; eye; high-speed optical techniques; **laser** applications in medicine; patient treatment; photography

Identifiers: fs-**laser**; cavitation bubble interaction; ophthalmology; LASIK; corneal tissue; ultra short **laser** pulse; nonlinear process; **laser** pulse absorption; bubble shape deformation; high speed photography

Dialog eLink: **USPTO Full Text Retrieval Options**

10/3,K/13 (Item 3 from file: 2)

DIALOG(R)File 2: INSPEC

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11824403

Title: **Femtosecond-lentotomy treatment: six-month follow-up of in vivo treated rabbit lenses**

Author(s): Schumacher, S.; Fromm, M.; **Oberheide, U.**; Bock, P.; Imbschweiler, I. ;

Hoffmann, H.; Beineke, A.; Gerten, G.; Wegener, A.; **Lubatschowski, H.**
Author Affiliation: Laser Zentrum Hannover e.V., Hanover, Germany
Journal: Proceedings of the SPIE - The International Society for Optical Engineering ,
vol.7373 , pp.73730H (8 pp.)
Publisher: SPIE - The International Society for Optical Engineering
Country of Publication: USA
Publication Date: 2009
Conference Title: Therapeutic Laser Applications and Laser-Tissue Interactions IV
Conference Date: 17-18 June 2009
Conference Location: Munich, Germany
ISSN: 0277-786X
CODEN: PSISDG
U.S. Copyright Clearance Center Code: 1605-7422/09/\$18.00
Item Identifier (DOI): [10.1117/12.831899](https://doi.org/10.1117/12.831899)
Language: English
Subfile(s): A (Physics); B (Electrical & Electronic Engineering)
INSPEC Update Issue: 2009-035
Copyright: 2009, The Institution of Engineering and Technology
Author(s): Schumacher, S.; Fromm, M.; **Oberheide, U.**; Bock, P.; Imbschweiler, I. ;
Hoffmann, H.; Beineke, A.; Gerten, G.; Wegener, A.; **Lubatschowski, H.**
Abstract: ...be the increase of the flexibility of the lens by creating gliding planes with
fs-laser pulses inside the lens tissue. In former studies it was shown that fs-laser pulses
were able to increase the flexibility of ex vivo porcine lenses as well as... vivo human
donor lenses. Our current aim was to evaluate the effect of the fs-laser pulses on the
crystalline lens of living rabbit eyes due to the fs-lentotomy treatment... coherence
tomography (OCT) and Scheimpflug imaging for localizing and studying the tissue
effects of the **incisions**. Furthermore histological sections of the lens and retina were
prepared. The rabbits were investigated pre operatively and up to six months post
operatively. The fs-laser induced micro **incisions** were successfully applied to the left
lens of each rabbit. The micro **incisions** within the crystalline lens were detectable with
OCT and Scheimpflug imaging up to six month. The imaging within the lens showed a
progressive fading of the **incisional** opacities generated by the femtosecond laser during
the six months and no indication of cataract formation was found. OCT and Scheimpflug
images emphasize themselves as necessary tools to monitor the micro **incisions** over
time. Histopathological sections of the lens tissue support the findings of the non
invasive...
Descriptors: biomedical optical imaging; eye; laser applications in medicine ; optical
tomography; surgery; vision defects
Identifiers: lentotomy treatment; presbyopia; lens tissue sclerosis; femtosecond laser
pulse; crystalline lens; cataract formation; retina damage; optical coherence tomography;
Scheimpflug imaging; fs-laser induced microincision; noninvasive imaging technique

*Prepublication
data?
Peter from
RA*

OK

Dialog eLink: **USPTO Full Text Retrieval Options**
10/3,K/14 (Item 4 from file: 2)
DIALOG(R)File 2: INSPEC

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07750023

Title: Intrastromal refractive surgery by ultrashort laser pulses: side effects and mechanisms

Author(s): Heisterkamp, A.; Maatz, G.; Ripken, T.; Lubatschowski, H.; Welling, H.; Luetkefels, E.; Drommer, W.; Ertmer, W.

Author Affiliation: Laser Zentrum Hannover eV, Germany

Journal: Proceedings of the SPIE - The International Society for Optical Engineering , vol.3908 , pp.146-56

Publisher: SPIE-Int. Soc. Opt. Eng

Country of Publication: USA

Publication Date: 2000

Conference Title: Ophthalmic Technologies X

Conference Date: 22-23 Jan. 2000

Conference Location: San Jose, CA, USA

Conference Sponsor: SPIE IBOS-Int. Biomed. Opt. Soc

ISSN: 0277-786X

SICI: 0277-786X(2000)3908L:146:IRSU;1-V

CODEN: PSISDG

U.S. Copyright Clearance Center Code: 0277-786X/2000/\$15.00

Language: English

Subfile(s): A (Physics); B (Electrical & Electronic Engineering)

INSPEC Update Issue: 2000-044

Copyright: 2000, IEE

Title: Intrastromal refractive surgery by ultrashort laser pulses: side effects and mechanisms

Author(s): Heisterkamp, A.; Maatz, G.; Ripken, T.; Lubatschowski, H.; Welling, H.; Luetkefels, E.; Drommer, W.; Ertmer, W.

Abstract: The feasibility of refractive surgery with ultrashort laser pulses in the fs-regime was studied. The experiments were performed with an erbium fiberlaser... ..muJ were possible. The photodisruption was performed in corneal tissue in order to create corneal incisions and lamellars. Surface quality and thermal damages of the cuts inside the tissue were studied...

Descriptors: bubbles; chromatography; eye; laser applications in medicine; pressure measurement; scanning electron microscopy; surgery

Identifiers: intrastromal refractive surgery; ultrashort laser pulses; side effects; Er fiberlaser oscillator; chirped pulse amplification; Ti:sapphire regenerative amplifier; pulse durations; pulse energies; photodisruption; corneal tissue; corneal lamellars; corneal incisions; surface quality; thermal damages; micromorphological analysis; scanning electron microscopy; histological sections; saline solution; bubble formation...

Dialog eLink: **USPTO Full Text Retrieval Options**

10/3,K/15 (Item 1 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)
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0013714418 **E.I. COMPENDEX No:** 1996520399210

Photoacoustic determination of optical parameters of biological tissue

Ruff, Chr.; Lohmann, S.; **Lubatschowski, H.**; Ertmer, W.

Corresp. Author/Affil: Ruff, Chr.: Universitaet Hannover, Hannover, Germany

Editor(s): Anon

Conference Title: Proceedings of the 1996 Conference on Lasers and Electro-Optics Europe, CLEO/Europe

Conference Location: Hamburg, Ger **Conference Date:** 19960908-19960913

E.I. Conference No.: 45465

Conference on Lasers and Electro-Optics Europe - Technical Digest (Conf Lasers Electro Opt Eur Tech Dig) 1996 , CFC3 (325)

Publication Date: 19960101

CODEN: 85PNA

Document Type: Conference Paper; Conference Proceeding **Record Type:** Abstract

Treatment: T; (Theoretical); X; (Experimental)

Language: English **Summary Language:** English

Number of References: 4

Ruff, Chr.; Lohmann, S.; **Lubatschowski, H.**; Ertmer, W.

These studies are directed towards an on-line monitoring of tissue properties during medical **laser** applications for diagnostics and therapy. These properties are in particular the optical parameters (i.e... ...scattering) and in the case of invasive treatments such as photoablation the depth of the **incision**. The determination of these properties can be performed by an interpretation of pressure signals which arise in the tissue during irradiation with pulsed **laser** light [1, 2]. For this purpose the fluence of the applied **laser** pulses was kept in the thermoelastic regime. At these fluences, the temperature of the irradiated region is increased by not more than a few Kelvin. For the detection of the **laser** induced acoustic transients piezoelectric transducers were used. The generated pressure signals are influenced by numerous...

Descriptors: Acoustic wave diffraction; Irradiation; **Laser** pulses; Online systems ; Photoacoustic effect; Piezoelectric transducers; Pulsed **laser** applications; Tissue; ***Laser** diagnostics

Identifiers: Medical **laser** applications; Optical parameters

Dialog eLink: Order File History

11/3,K/1 (Item 1 from file: 350)

DIALOG(R)File 350: Derwent WPIX

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XRPX Acc No: N2005-453410

RIPKEN T (RIPK-I); ROWIAK GMBH (ROWI-N)

Inventor: **LUBATSCHOWSKI H; OBERHEIDE U; RIPKEN T**

Patent Family (5 patents, 107 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050165387	A1	20050728	US 2004764311	A	20040123	200556	B
WO 2005070358	A1	20050804	WO 2005EP530	A	20050120	200556	E
EP 1663087	A1	20060607	EP 2005701074	A	20050120	200638	E
			WO 2005EP530	A	20050120		
JP 2007527741	W	20071004	WO 2005EP530	A	20050120	200767	E
			JP 2006550036	A	20050120		
CN 101180017	A	20080514	CN 200580007875	A	20050120	200851	E
			WO 2005EP530	A	20050120		

Priority Applications (no., kind, date): US 2004764311 A 20040123

Patent Details

Patent Number	Kind	Lang	Pgs	Draw	Filing Notes	
US 20050165387	A1	EN	6	4		
WO 2005070358	A1	DE				
National Designated States, Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
Regional Designated States, Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					
EP 1663087	A1	DE			PCT Application	WO 2005EP530
					Based on OPI patent	WO 2005070358
Regional Designated	AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR					

States,Original						
JP 2007527741	W	JA	20		PCT Application	WO 2005EP530
					Based on OPI patent	WO 2005070358
CN 101180017	A	ZH			PCT Application	WO 2005EP530
					Based on OPI patent	WO 2005070358

Surgical laser controller for eye treatment e.g. cataract, controls laser that is connected to it, to... Original Titles:Control device for surgical laserCONTROL DEVICE FOR A SURGICAL LASERControl for a surgical laserCONTROL DEVICE FOR A SURGICAL LASER Inventor: LUBATSCHOWSKI H...
...OBERHEIDE U... ..RIPKEN T Original Publication Data by
AuthorityArgentinaPublication No. Inventor name & address:OBERHEIDE U...
...RIPKEN T... ..LUBATSCHOWSKI H... ..LUBATSCHOWSKI, Holger...
...RIPKEN, Tammo... ..OBERHEIDE, Uwe... ..Lubatschowski, Holger... ..Ripken, Tammo... ..Oberheide, Uwe... ..LUBATSCHOWSKI, Holger... ..RIPKEN, Tammo... ..OBERHEIDE, Uwe
Original Abstracts:The invention claims preferably surgical lasers and control devices thereof, in addition to methods for treating transparent material, in particular eye... .. The invention relates to, preferably surgical lasers and control devices thereof, in addition to methods for treating a transparent material, in particular... .. The invention concerns surgical lasers and their controllers as well as methods for the treatment of an eye lens, especially... .. The invention relates to, preferably surgical lasers and control devices thereof, in addition to methods for treating a transparent material, in particular... ..**Claims:**CLAIM 12] A surgical laser, wherein said laser is in control connection to a controller according to one of claims...


PATENTS & NPL ABSTRACTS

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Set	Items	Description
S1	240457	(INCISION? OR EXCISION? OR CUT OR CUTS OR CUTTING OR SLIT OR SLITS) (3N) (TWO OR 2 OR DUAL OR MANY OR TWIN OR MORE() THAN() ONE OR MULTI OR MULTIPL? OR PAIR OR DUO OR COUPLE OR DOUBLE OR DUPLICATE)
S2	69275	LENS? (3N) (EYE OR EYES)
S3	30505	CRYSTALLINE? (2N) LENS?
S4	28902438	CONTROL? ? OR CONTROLER? ? OR CONTROLL??? OR (CONTROL OR GOVERN??? OR REGULAT???) (3N) (SYSTEM? ? OR SOFTWARE OR PROGRAM? ? OR APPLICATION? ? OR APP OR APPS OR INTERFACE? ? OR MODULE? ? OR COMPUTER? ?)
S5	11377	SURGICAL? (3N) (LASER? ? OR LIGHT() AMPLIFY? OR GRASER OR (GAMMA OR X() RAY) (2W) (LASER OR KNIFE OR KNIVES) OR OPTICAL (3N) QUANTUM() GENERATOR OR SOLID() LASER OR (GAMMA() RAY OR LIGHT) () AMPLIFICATION (2W) STIMULATED() EMISSION)
S6	3437364	MM OR MILLIMETER? OR MILLIMETRE?
S7	53384980	SIMULTANEOUS? OR TOGETHER OR AT() ONCE OR CONCURRENT? OR SAME() (TIME OR INSTANT OR MOMENT) OR COINCIDENT?? OR COINSTANTANEOUS OR SYNCHRONI? OR SYNCHRONO? OR COLLECTIVE?? OR EN() MASSE OR SET OR BUNDLE OR PACKAGE OR PAIR??? OR COUPL??? OR COMBIN??? OR AGGREGAT??? OR AGGRAGAT??? OR BOTH OR DURING
S8	319	S1 AND S2
S9	89	S1 AND S3
S10	69	S8 AND S4
S11	3	S8 AND S5
S12	151	S8 AND S6
S13	166	S8 AND S7
S14	8	S9 AND S10
S15	8	S9 AND S12
S16	77	S12 AND S13
S17	26	S16 AND S10
S18	39	S11 OR S14:S15 OR S17
S19	31	RD (unique items)
S20	26	S19 NOT PY>2004



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20/3,K/1 (Item 1 from file: 350)

DIALOG(R)File 350: Derwent WPIX

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0013366174 *Drawing available*

WPI Acc no: 2003-455595/200343

XRAM Acc no: C2003-121103

XRPIX Acc No: N2003-362221

Anterior chamber intraocular lens folding and inserting instrument for double folding and inserting intraocular lens in patient's eye, has insertion tube, receiving

station, support element, double folding member, and drive member

Patent Assignee: PORTNEY V (PORT-I)

Inventor: PORTNEY V

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 6500181	B1	20021231	US 2000690783	A	20001017	200343	B

Priority Applications (no., kind, date): US 2000690783 A 20001017

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 6500181	B1	EN	18	24	

Anterior chamber intraocular lens folding and inserting instrument for double folding and inserting intraocular lens in patient's eye, has insertion tube, receiving station, support element, double folding member, and drive member Alerting

Abstract ... region of an IOL in the receiving station against an inner surface of the tube **during** double folding of the IOL; an IOL **double** folding member installed on the tube; and a drive member for causing relative axial movement... ... intraocular lens and inserting the double folded IOL into the anterior chamber of a patient's eye (34) for **controlled** unfolding.... ... injuring the endothelial cell surface of the cornea and/or the anterior surface of the **crystalline lens** is minimized. **Technology Focus** ...an external height of the insertion tip. It is sized for insertion through an ocular **incision** of ≥ 3.2 mm. The distal end of the insertion tip is beveled at an angle of 30-45°. **Extension**

Abstract Original Publication Data by Authority Argentina **Publication No.** ... **Original Abstracts:** insertion through a small incision into the anterior chamber of a patient's eye for **controlled** unfolding. The instrument **comprises** an elongate, slender IOL insertion tube having an IOL receiving station located in the tube... ... an IOL received in the IOL receiving station against an inner surface of the tube **during** the double folding of the IOL. An IOL double folding member installed on the tube has a converging recess... ... the insertion tube and is sized for passing through an ocular incision no greater than about 3.2 mm. >... **Claims:** inserting said double folded IOL into the anterior chamber of a patient's eye for controlled unfolding, said instrument comprising: a. an elongate, slender IOL insertion tube having a distal end and a longitudinal axis; b. an IOL... ... an IOL received in said IOL receiving station against an inner surface of said tube during double folding of said IOL; d. an IOL double folding member installed on said tube, said IOL double folding member having a converging recess facing said IOL receiving...

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20/3,K/2 (Item 2 from file: 350)

DIALOG(R)File 350: Derwent WPIX

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0010628044 *Drawing available*

WPI Acc no: 2001-234629/200124

XRPX Acc No: N2001-167791

Flexible artificial lens forming and displacing equipment for eye surgery has lens deforming surfaces to form the lens into multiple folds engaged by elongated prongs and a plunger to displace the prongs and discharge the lens

Patent Assignee: SURGICAL CONCEPTS INC (SURG-N)

Inventor: MCDONALD H H

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 6206887	B1	20010327	US 1999382118	A	19990824	200124	B

Priority Applications (no., kind, date): US 1999382118 A 19990824

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 6206887	B1	EN	7	9	

Flexible artificial lens forming and displacing equipment for eye surgery has lens deforming surfaces to form the lens into multiple folds engaged by elongated prongs and a... Alerting Abstract ...the lens folds and squeeze the lens into a compact form as they are deflected **together** by cam surfaces (47,48) actuated by forward pushing and **controlled** squeezing of a bow spring (46). After insertion a plunger (58,59) displaces the prongs... ... and displacing; a method of deforming a flexible artificial lens in preparation for insertion into **the eye**. and methods for inserting a flexible artificial lens unit into the inter-ocular zone of **the eye** between the cornea and natural **lens**.... ... and squeezed into a very compact form for insertion into the eye via a small **slit** of about **2-3 mm** length followed by **controlled** release of the **lens** unit, thereby enabling **rapid** and efficient lens insertion and positioning, whilst reducing the wound opening size to promote faster

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20/3,K/3 (Item 3 from file: 350)

DIALOG(R)File 350: Derwent WPIX

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0008816958

WPI Acc no: 1998-362486/199831

Related WPI Acc No: 1996-354269

XRAM Acc no: C1998-111491

XRFX Acc No: N1998-283025

Apparatus for inserting intraocular lens through small incision into eye - comprises hollow tube including interior wall through which lens is passed and outlet through which lens is passed into eye and lubricity enhancing component bonded to hollow tube at interior wall

Patent Assignee: ADVANCED MEDICAL OPTICS INC (ADME-N); ALLERGAN (ALLR); ALLERGAN SALES INC (ALLR)

Inventor: CUNANAN C M; MCNICHOLAS T M; MCNICHOLS T M; YANG S S

Patent Family (6 patents, 19 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1998026733	A1	19980625	WO 1997US23186	A	19971211	199831	B
US 5803925	A	19980908	US 1995373822	A	19950117	199843	E
			US 1996769324	A	19961219		
EP 952796	A1	19991103	EP 1997951716	A	19971211	199951	E
			WO 1997US23186	A	19971211		
JP 2001504740	W	20010410	WO 1997US23186	A	19971211	200128	E
			JP 1998527904	A	19971211		
EP 952796	B1	20030903	EP 1997951716	A	19971211	200360	E
			WO 1997US23186	A	19971211		
DE 69724653	E	20031009	DE 69724653	A	19971211	200374	E
			EP 1997951716	A	19971211		
			WO 1997US23186	A	19971211		

Priority Applications (no., kind, date): US 1995373822 A 19950117; US 1996769324 A 19961219

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 1998026733	A1	EN	41	7		
National Designated States,Original	JP					
Regional Designated States,Original	AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
US 5803925	A	EN			C-I-P of application	US 1995373822
EP 952796	A1	EN			PCT Application	WO 1997US23186
					Based on OPI patent	WO 1998026733

Regional Designated States,Original	CH DE FR GB LI NL SE					
JP 2001504740	W	JA	38		PCT Application	WO 1997US23186
					Based on OPI patent	WO 1998026733
EP 952796	B1	EN			PCT Application	WO 1997US23186
					Based on OPI patent	WO 1998026733
Regional Designated States,Original	CH DE FR GB LI NL SE					
DE 69724653	E	DE			Application	EP 1997951716
					PCT Application	WO 1997US23186
					Based on OPI patent	EP 952796
					Based on OPI patent	WO 1998026733

...comprises hollow tube including interior wall through which lens is passed and outlet through which lens is passed into eye and lubricity enhancing component bonded to hollow tube at interior wall Alerting Abstract ...e folded lens through the hollow space; and (2) a method for inserting an intraocular lens into an eye comprising: placing an outlet of a hollow tube in or in proximity to an incision... ...selected from hydrophilic and/or oleophilic components. The hollow tube is sized to pass the lens into the eye through an incision no larger than 3.5 (especially 3, more especially 2.8)mm. The apparatus also comprises a loading portion coupled to the hollow tube and sized and adapted to receive the lens. The lubricity enhancing... ...ADVANTAGE - The apparatus has wide applicability and facilitates the passage of the lens in a controlled manner without using excessive force. The apparatus is straightforward, easy to use and involves little... **Documentation Abstract** ...2) a method for inserting an intraocular lens into an eye comprising: placing an outlet of a hollow tube in or in proximity to an incision... ...ADVANTAGE - The apparatus has wide applicability and facilitates the passage of the lens in a controlled manner without using excessive force. The apparatus is straightforward, easy to use and involves little... ...The hollow tube is sized to pass the lens into the eye through an incision no larger than 3.5 (especially 3, more especially 2.8) mm. ...The apparatus also comprises a loading portion coupled to the hollow tube and sized and adapted to receive the lens. The lubricity enhancing... ...were selected. The cartridges had injection tube with a distal end suitable for insertion into 2.6 mm incision and were treated to form a coating of polyvinylpyrrolidone covalently bonded at the interior walls **Documentation Abstract Image** Original Publication Data by AuthorityArgentinaPublication No. **Original Abstracts:**Apparatus for inserting intraocular lenses (IOLs) into eyes are disclosed. In one embodiment, such apparatus includes a hollow tube including an interior wall defining a hollow space... ... Apparatus for inserting intraocular lenses (IOLs) into eyes are disclosed. In one embodiment, such apparatus includes a hollow tube including an interior wall defining a hollow space through which an IOL is... ... Apparatus for inserting intraocular lenses (IOLs) into eyes

are disclosed. In one embodiment, such apparatus includes a hollow **tube** including an **interior** wall defining a hollow space through which an IOL is passed and an outlet through... ..**Claims:**outlet (26) through which said intraocular lens is passed from said hollow space into an **eye**; anda lubricity enhancing component (20) covalently bonded to said hollow tube (14) at said... .. a liquid component in the hollow space, the liquid component and the lubricity enhancing component **together** being present in an amount effective to facilitate the passage of said intraocular lens through said hollow space.... .. intraocular lens in a folded state may be passed from said hollow space into an **eye**; **anda** lubricity enhancing component covalently bonded to said hollow tube at said interior wall in

Dialog eLink: [Order File History](#)

20/3,K/4 (Item 4 from file: 350)

DIALOG(R)File 350: Derwent WPIX

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0007905742 *Drawing available*

WPI Acc no: 1996-384179/199638

Related WPI Acc No: 2003-379512; 2003-766602; 2006-209901

XRPX Acc No: N1996-323819

Treating cataracts in-vivo by lenticular liquefaction and aspiration - liquefying cataractous lens nucleus by heating to temp of between 110 and 215 deg. and aspirating liquefied lens nucleus

Patent Assignee: ANDREW M (ANDR-I); ANDREW M S (ANDR-I)

Inventor: ANDREW M; ANDREW M S

Patent Family (13 patents, 21 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1996024314	A1	19960815	WO 1995US17072	A	19951218	199638	B
AU 199646915	A	19960827	AU 199646915	A	19951218	199649	E
US 5616120	A	19970401	US 1995384655	A	19950206	199719	E
EP 812169	A1	19971217	EP 1995944571	A	19951218	199804	E
			WO 1995US17072	A	19951218		
JP 10513091	W	19981215	WO 1995US17072	A	19951218	199909	E
			JP 1996524249	A	19951218		
AU 704305	B	19990422	AU 199646915	A	19951218	199927	E
US 6074358	A	20000613	US 1995384655	A	19950206	200035	E
			US 1997823713	A	19970325		
US 6319222	B1	20011120	US 1995384655	A	19950206	200174	E
			US 1997823713	A	19970325		

			US 2000552767	A	20000420		
CA 2211031	C	20020205	CA 2211031	A	19951218	200213	E
			WO 1995US17072	A	19951218		
EP 812169	B1	20040331	EP 1995944571	A	19951218	200426	E
			WO 1995US17072	A	19951218		
DE 69532822	E	20040506	DE 69532822	A	19951218	200434	E
			EP 1995944571	A	19951218		
			WO 1995US17072	A	19951218		
ES 2217290	T3	20041101	EP 1995944571	A	19951218	200474	E
JP 3599744	B2	20041208	WO 1995US17072	A	19951218	200481	E
			JP 1996524249	A	19951218		

Priority Applications (no., kind, date): US 1995384655 A 19950206; US 1997823713 A 19970325; US 2000552767 A 20000420

19970323; US 20060521000

US 6319222	B1	EN			Division of application	US 1995384655
					Continuation of application	US 1997823713
					Division of patent	US 5616120
					Continuation of patent	US 6074358
CA 2211031	C	EN			PCT Application	WO 1995US17072
					Based on OPI patent	WO 1996024314
EP 812169	B1	EN			PCT Application	WO 1995US17072
					Based on OPI patent	WO 1996024314
Regional Designated States, Original	AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
DE 69532822	E	DE			Application	EP 1995944571
					PCT Application	WO 1995US17072
					Based on OPI patent	EP 812169
					Based on OPI patent	WO 1996024314
ES 2217290	T3	ES			Application	EP 1995944571
					Based on OPI patent	EP 812169
JP 3599744	B2	JA	7		PCT Application	WO 1995US17072
					Previously issued patent	JP 10513091
					Based on OPI patent	WO 1996024314

Alerting Abstract ...the nucleus in order to heat and liquefy the nucleus. The lens nucleus is irrigated **simultaneously** with a cooled solution (34) to limit to a very small area where the heat... ...36,37) from the eye. The system allows removal of lens nucleus through a 1 **mm** to 2 **mm** corneal limbus **incision**. An aspiration tube (36) has one end connected to one (22) of three lumens (22ADVANTAGE - Allows surgeon precise **control** over which intraocular anterior segment structures are exposed to heat. Allows small incision cataract removal... Original Publication Data by AuthorityArgentina**Publication No.** ...**Original Abstracts:**nucleus in order to heat and liquefy the same. The lens nucleus (42) is irrigated **simultaneously** with a cooled **solution** (34) to thereby limit to a very small area where the heat or heated solution is present in the eye (40). This allows the surgeon precise **control** over which intraocular **anterior** segment structures are exposed to the heat or heated solution (30). The liquefied lens nuclear material is then aspirated (22, 36, 37) from the eye. The above allows **the** removal of a **lens** nucleus through a 1 **mm** to 2 **mm** corneal limbus **incision** (46) which is **smaller** than previously known small incision cataract techniques. The above benefits the patient as it allows... ... hardened nucleus in order to heat and liquefy the same. The lens nucleus is irrigated **simultaneously** with a cooled solution to thereby limit to a very

small area where the heat or heated solution is present in the eye. This allows the surgeon precise **control** over which intraocular anterior segment structures are exposed to the heat or heated solution. The liquefied lens nuclear material is then aspirated from the **eye**. The above allows the removal of a **lens nucleus** through a 1 to 2 **mm** corneal or limbal **incision** which is smaller **than the smallest incision** allowable with previously known small incision cataract techniques. The above benefits the patient as it... .. hardened nucleus in order to heat and liquefy the same. The lens nucleus is irrigated **simultaneously** with a cooled solution to thereby limit to a **very** small area where the heat or heated solution is present in the eye. This allows the surgeon precise **control** over which intraocular anterior segment structures are exposed to **the** heat or heated solution. The liquefied lens nuclear material is then aspirated from the **eye**. The **above** allows the removal of a **lens nucleus** **through** a 1 to 2 **mm** corneal or limbal incision which is smaller than **the smallest incision** allowable with previously known small incision cataract techniques. The above benefits the patient as it... .. hardened nucleus in order to heat and liquefy the same. The lens nucleus is irrigated **simultaneously** with a cooled solution to thereby limit to a **very** small area where the heat or heated solution is present in the eye. This allows the surgeon precise **control** over which intraocular anterior segment structures are exposed to **the** heat or heated solution. The liquefied lens nuclear material is then aspirated from the **eye**. The **above** allows the removal of a **lens nucleus** **through** a 1 to 2 **mm** corneal or limbal incision which is smaller than **the smallest incision** allowable with previously known small incision cataract techniques. The above benefits the patient as it... nucleus in order to heat and liquefy the same. The lens nucleus (42) is irrigated **simultaneously** with a cooled solution (34) to thereby limit to a very small area **where** the heat or heated solution is present in the eye (40). This allows the surgeon precise **control** over which intraocular anterior segment structures are exposed to the heat or heated **solution** (30). The liquefied lens nuclear material is then aspirated (22, 36, 37) from the **eye**. The above **allows** the removal of a lens nucleus through a 1 **mm** to 2 **mm** corneal limbus **incision** (46) which is smaller than previously known **small incision cataract techniques**. The above **benefits** the patient as it allows small incision cataract removal that is non-traumatic to intraocular...

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20/3,K/5 (Item 5 from file: 350)

DIALOG(R)File 350: Derwent WPIX

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0007161898 *Drawing available*

WPI Acc no: 1995-200164/199526

XRPX Acc No: NI995-157247

Illuminating lens-mirror assembly for visualising images of intra-corneal structures in cornea - illuminates intra-corneal structures in cornea proximate to keratoscopic lens for correcting aberrations in images of intra- ocular structures

Patent Assignee: SMITH A D (SMIT-I)

Inventor: SMITH A D

Patent Family (6 patents, 56 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1995013768	A1	19950526	WO 1994US13176	A	19941115	199526	B
AU 199511794	A	19950606	AU 199511794	A	19941115	199538	E
US 5486188	A	19960123	US 1993151996	A	19931115	199610	E
EP 729327	A1	19960904	WO 1994US13176	A	19941115	199640	E
			EP 1995902566	A	19941115		
US 5626594	A	19970506	US 1993151996	A	19931115	199724	E
			US 1995574615	A	19951219		
JP 9506274	W	19970624	WO 1994US13176	A	19941115	199735	E
			JP 1995514566	A	19941115		

Priority Applications (no., kind, date): US 1993151996 A 19931115; US 1995574615 A 19951219

19951219

Patent Details						
Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 1995013768	A1	EN	68	10		
National Designated States,Original	AM AT AU BB BG BR BY CA CH CN CZ DE DK ES FI GB GE HU JP KE KG KP KR KZ LK LT LU LV MD MG MN MW NL NO NZ PL PT RO RU SD SE SI SK TJ TT UA US UZ VN					
Regional Designated States,Original	AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
AU 199511794	A	EN			Based on OPI patent	WO 1995013768
US 5486188	A	EN	18	29		
EP 729327	A1	EN	1		PCT Application	WO 1994US13176
					Based on OPI patent	WO 1995013768
Regional Designated States,Original	AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
US 5626594	A	EN	18	29	Division of application	US 1993151996
					Division of patent	US 5486188
JP 9506274	W	JA	72		PCT Application	WO 1994US13176
					Based on OPI patent	WO 1995013768

Alerting Abstract ...that an inferior, concave spherical surface (6) having a radius of curvature between 7.4 mm and 10 mm, can be placed on the anterior surface of the cornea, which conforms to the shape... ...Guiding incisions, measuring relative opacities, and visualisation of sagittal section through transparent optical medium in **controlling** partial-thickness corneal incisions, in e.g lamellar keratoplasty and radial keratotomy through real-time... Original Publication Data by AuthorityArgentina**Publication No.** ...**Original Abstracts:**lens positionable over a cornea, containing an incision guide slot adjacent to which is disposed **two mirror** surfaces within the lens. The mirrors are angled to allow a surgeon to observe and **control** the blade depth penetration into the cornea. The **slotted**, mirrored lens is rotatable and has clip and notch means to locate any of sixteen... ... the sclera defines a vacuum chamber for holding the eye in position relative to the **lens**. ... surfaces within the lens. The mirrors are angled to allow a surgeon to observe and **control** the blade depth penetration into the cornea. The slotted, mirrored lens is rotatable **and** has clip and notch means to locate any of sixteen different radial incision positions. Transverse...**Claims:**that an inferior, concave spherical surface (6) having a radius of curvature between 7.4 mm and 10 mm, can be placed on the anterior surface of the cornea, which conforms to the shape... ... of the penetration depth of a corneal surgical incision made by said incision forming means **concurrently** with **the** making of the incision...

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20/3,K/6 (Item 6 from file: 350)
DIALOG(R)File 350: Derwent WPIX

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0005033887 *Drawing available*
WPI Acc no: 1990-014796/199002

Slit lamp microscope for observing e.g. cornea and crystalline lens - scans laser beam vertically and horizontally within selected area of eye under control of beam intensity regulator

Patent Assignee: KOWA CO LTD (KOWA)

Inventor: ICHIHASHI T; ISCIHASHI T; KAWAMURA M

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 4877321	A	19891031	US 1989311424	A	19890214	199002	B

Priority Applications (no., kind, date): JP 1986130060 A 19860606

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
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Slit lamp microscope for observing e.g. cornea and crystalline lens - ... scans laser beam vertically and horizontally within selected area of eye under control of beam intensity regulator **Original Titles:** Slit lamp microscope **Alerting Abstract ...** The microscope includes a **laser** source for producing a **laser** beam and a projector for projecting the **laser** beam onto an eye to be examined. A device serves for scanning the **laser** beam vertically and horizontally within a selected area of the eye to be examined to form a **slit** image which illuminates the selected area. A scanner **controller** varies scanning speed of the **laser** beam and varies the vertical and horizontal range of scanning. An optical device serves for... A device serves for regulating the intensity of the **laser** beam to a predetermined level depending upon the quantity of light received by the optical device to obtain a constant luminous intensity of the **slit** image irrespective of variations in the scanning image... **ADVANTAGE** - Quantity of illuminating light is not changed when width of light from **slit** is narrowed. **Title Terms /Index** Terms/Additional Words: **SLIT**; ... **LASER**; **Class Codes** Original Publication Data by Authority Argentina **Publication No. Original Abstracts:** A **slit** lamp microscope for use in observing the cornea, **crystalline lens** and other **tissues** of an eye includes a scanning device for scanning the **laser** beam vertically and **horizontally** within a selected area of the eye to be examined to form thereon a **slit** image which illuminates the selected area. A regulating device is provided for regulating the intensity of the **laser** beam to a **predetermined** level depending upon the amount of light reflected from the eye. The scanning device is... to change its scanning area to make the selected area variable to thereby provide a **slit** image which is **changeable** in size.

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USPTO Full Text Retrieval Options

20/3,K/7 (Item 1 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

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15873478 **PMID:** 15050247

Optimizing refractive lens exchange with bimanual microincision phacoemulsification.

Fine I Howard; Hoffman Richard S; Packer Mark

Drs. Fine, Hoffman & Pacler, LLC, Eugene, OR 97401, USA.

Journal of cataract and refractive surgery (United States) Mar 2004 , 30 (3) p550-4 ,

ISSN: 0886-3350--Print 0886-3350--Linking **Journal Code:** 8604171

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Bimanual microincision phacoemulsification entails the removal of the **crystalline lens** through **2 1.2 mm incisions**. Infusion is provided through a separate irrigating handpiece, and phacoemulsification and aspiration are performed through... plane, and residual cortex removal are performed through the microincisions. This technique offers improved surgeon **control** throughout the procedure and added safety by maintaining continuous pressurization of the **eye** while removing the **lens** far from the posterior capsule. (

Descriptors: *Lens Implantation, Intraocular--methods--MT; ***Lens, Crystalline--surgery--SU**; *Phacoemulsification--methods--MT; *Surgical Procedures, Minimally Invasive

Dialog eLink:

USPTO Full Text Retrieval Options

20/3,K/8 (Item 2 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

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15568117 **PMID:** 14518737

The Duet-Kelman lens: A new exchangeable angle-supported phakic intraocular lens.

Alio Jorge L; Kelman Charles

Instituto Oftalmologico de Alicante, Refractive Surgery and Cornea Department, Miguel Hernandez University, School of Medicine, Alicante, Spain. jlalio@oftalio.com

Journal of refractive surgery (Thorofare, N.J. - 1995) (United States) Sep-Oct 2003 , 19 (5) p488-95 , **ISSN:** 1081-597X--Print 1081-597X--Linking **Journal Code:** 9505927

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

...parts. The haptic and the optic are separately implanted and then fixed together inside the **eye**. The **lens** allows optic or haptic exchange depending on the anatomical, refractive, and visual outcome of the ... of 6 months. Surgery was performed under topical anesthesia. **RESULTS:** Surgery was feasible through a **2.5-mm incision**, without complications. Refractive and visual results were stable in all eyes. Haptic exchange was done... (

Descriptors: *Anterior Chamber--surgery--SU; *Lens Implantation, Intraocular--methods --MT; ***Lens, Crystalline--physiology--PH**; ***Lenses**, Intraocular; *Refractive Surgical Procedures

Dialog eLink:

USPTO Full Text Retrieval Options

20/3,K/9 (Item 3 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

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14433985 PMID: 11564107

Absorbed doses from spiral CT and conventional spiral tomography: a phantom vs. cadaver study.

Bou Serhal C; Jacobs R; Gijbels F; Bosmans H; Hermans R; Quirynen M; van Steenberghe D

Department of Periodontology, Oral Imaging Cluster, School of Dentistry, Oral Pathology and Maxillofacial Surgery, Catholic University Leuven, Kapucijnenvoer 7, 3000 Leuven, Belgium.

Clinical oral implants research (Denmark) Oct 2001 , 12 (5) p473-8 , ISSN: 0905-7161--Print 0905-7161--Linking Journal Code: 9105713

Publishing Model Print

Document type: Journal Article; Research Support, Non-U.S. Gov't

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

...200) in the thyroid gland, and bilaterally, in the parotid and submandibular glands and the lenses of the eyes in both a human cadaver and a Rando phantom at corresponding locations. Consecutive conventional spiral... using a Cranex TOME multifunctional unit. Each examination consisted of 4 slices with a 2 mm slice thickness and exposure parameters of 57 kV, 56 seconds and 1.6-2.0... CT), a Somatom Plus S scanner (Siemens, Erlangen, Germany), with a slice thickness of 1 mm with settings at 120 kV and 165 mA, was used on both phantoms and separately... examined, radiation doses during conventional tomography remain much lower than during CT imaging. However, when multiple tomographic cuts are required, a spiral CT examination can replace a series of conventional examinations, especially in... (

Descriptors: ; ...Bicuspid--radiography--RA; Cadaver; Humans; Image Processing, Computer-Assisted--methods--MT; Jaw, Edentulous--radiography--RA; Lens, Crystalline--radiation effects--RE; Parotid Gland --radiation effects--RE; Submandibular Gland--radiation effects--RE; Thermoluminescent Dosimetry...

Named Person:

Dialog eLink:

USPTO Full Text Retrieval Options

20/3,K/10 (Item 4 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

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12951681 PMID: 9713056 Record Identifier: PMC1722590

Initial clinical experience with the picosecond Nd:YLF laser for intraocular therapeutic applications.

Geerling G; Roeder J; Schmidt-Erfurt U; Nahen K; el-Hifnawi el-S; Laqua H; Vogel A
Department of Ophthalmology, Medical University of Lubeck, Germany.

British journal of ophthalmology (ENGLAND) May 1998 , 82 (5) p504-9 , ISSN: 0007-1161--Print 0007-1161--Linking **Journal Code:** 0421041
Publishing Model Print; Cites Lasers Surg Med. 1989;9(3):193-204 PMID 2659910;
Cites Invest Ophthalmol Vis Sci. 1994 Jun;35(7):3032-44 PMID 8206720; Cites Am J Ophthalmol. 1986 Jul 15;102(1):41-4 PMID 3728623; Cites Arch Ophthalmol. 1986 Aug;104(8):1134 PMID 3741237; Cites Ophthalmology. 1993 Aug;90(4):387-90 PMID 8374239; Cites Adv Ophthalmol. 1977;34:192-6 PMID 868692; Cites Arch Ophthalmol. 1986 Jan;104(1):123-5 PMID 3753646; Cites Ophthalmology. 1986 Oct;93(10):1259-69 PMID 3785885; Cites Ophthalmology. 1985 Oct;92(10):1387-95 PMID 4069602; Cites Am J Ophthalmol. 1973 Apr;75(4):674-8 PMID 4735265; Cites Ophthalmology. 1984 Sep;91(9):1011-6 PMID 6387569; Cites Arch Ophthalmol. 1982 Jun;100(6):924-5 PMID 7092630; Cites Arch Ophthalmol. 1982 Oct;100(10):1665-70 PMID 7138337; Cites Ophthalmic Surg. 1982 Dec;13(12):1030-2 PMID 7162765; Cites Int Ophthalmol. 1981 May;3(3):129-39 PMID 7196390; Cites J Am Intraocul Implant Soc. 1980 Oct;6(4):352-4 PMID 7440377; Cites J Cataract Refract Surg. 1995 Sep;21(5):586-90 PMID 7473125; Cites Lasers Surg Med. 1994;15(1):32-43 PMID 7997046; Cites Ophthalmology. 1988 Sep;95(9):1207-11 PMID 3062535

Document type: Clinical Trial; Controlled Clinical Trial; Journal Article; Research Support, Non-U.S. Gov't

Languages: ENGLISH

Main Citation Owner: NLM

Other Citation Owner: NLM

Record type: MEDLINE; Completed

...microJ single pulse energy at a repetition rate of 0.12-1.0 kHz. Computer **controlled** patterns were used to perform iridectomies (n = 53), capsulotomies (n = 9), synechiolysis (n = 3), and pupilloplasties (n = 2). Other procedures were vitreoretinal strand **incision** (n = 2) and peripheral retinotomy (n = 1). For comparison, 10 capsulotomies and 20 iridotomies were performed with... ..the cases. In 64% an iris bleeding and in 21% an IOP increase of > 10 mm Hg occurred. All capsulotomies were performed successfully (mean energy 690 mJ/mm cutting length) but with a high incidence of intraocular lens damage. The attempted vitreoretinal applications remained unsuccessful as a result of optical aberrations of the eye and contact lens. Although ps laser capsulotomies and iridectomies required much higher total energy than ns procedures, the... ..the edge of a continuous curvilinear capsulorhexis. **CONCLUSION:** Series of ps pulses applied in computer **controlled** patterns can be used effectively for laser surgery in the anterior segment and are considerably ... (

Descriptors: ; Humans; Iris--surgery--SU; Lens Capsule, **Crystalline**--surgery --SU; Lens Capsule, **Crystalline**--ultrastructure--UL; Microscopy, Electron, Scanning; Phimosis--surgery--SU

Named Person:

Dialog eLink:

USPTO Full Text Retrieval Options

20/3,K/11 (Item 5 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

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12801034 PMID: 9547777

Phacotrabeculectomy: comparison of results from 3.5- and 5.2- mm incisions.

Vyas A V; Bacon P J; Percival S P

Department of Ophthalmology, Scarborough District Hospital, England.

Ophthalmic surgery and lasers (UNITED STATES) Mar 1998 , 29 (3) p227-33 ,

ISSN: 1082-3069--Print 1082-3069--Linking Journal Code: 9517132

Publishing Model Print

Document type: Clinical Trial; Comparative Study; Controlled Clinical Trial; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Phacotrabeculectomy: comparison of results from 3.5- and 5.2- mm incisions.

BACKGROUND AND OBJECTIVE: To compare the intraocular pressure control, visual results, and astigmatic results of 3.5-mm and 5.2-mm incisions following phacotrabeculectomy with 12 months of follow-up. **PATIENTS AND METHODS:** Fifty eyes underwent clear cornea punch trabeculectomy under a 5.0 x 2.5-mm scleral flap, closed with two 10-0 polyglactin sutures. The first 25 eyes underwent wound extension to 5.2 mm for insertion of a single-piece polymethylmethacrylate (PMMA) lens. The next 25 eyes underwent wound extension to 3.5 mm for insertion of a folded silicone lens. **RESULTS:** The mean intraocular pressure decrease from the preoperative level was 7.6 mm Hg in the 3.5-mm incision group and 7.8 mm Hg in the 5.2-mm incision group. One patient required continued medication. The best-corrected visual acuity was 20/40 or... or the need for antimetabolites. For surgeons who wish to reduce costs without compromising results during phacotrabeculectomy, there is merit in considering a 5.2-mm incision; moreover, the more rigid single-piece PMMA lens appears to be associated with fewer complications... (

Dialog eLink: **USPTO Full Text Retrieval Options**

20/3,K/12 (Item 6 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

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11953127 PMID: 8778367

Eye growth in the aphakic newborn rabbit.

Kugelberg U; Zetterstrom C; Lundgren B; Syren-Nordqvist S

Department of Ophthalmology, S:t Erik Eye Hospital, Stockholm, Sweden.

Journal of cataract and refractive surgery (UNITED STATES) Apr 1996 , 22 (3)

p337-41 , ISSN: 0886-3350--Print 0886-3350--Linking Journal Code: 8604171

Publishing Model Print

Document type: Journal Article; Research Support, Non-U.S. Gov't

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

...Sweden. **METHODS:** Unilateral lensectomy was performed in 18 randomly selected 23-day-old rabbits. Corneal **incision** was performed in 2 other rabbits, and the aqueous humor was replaced with balanced salt solution in one eye... ..as indicated by axial length and corneal diameter, was significantly less than that of the **control** eye in 14 rabbits. No significant difference in IOP or corneal thickness was found between the **lensectomy** and **control eyes**. Four animals had elevated IOP with secondary glaucoma and were excluded from the study. No difference in eye growth was found between the two **eyes** when no **lensectomy** was performed. Refraction in the unoperated eye showed a myopic shift. After **lensectomy**, the operated **eye** became hyperopic with a myopic shift 3 months after surgery. No correlation was found between... ..wet mass of the after-cataract. **CONCLUSIONS:** Our results suggest that removal of the rabbit **crystalline lens** at an early age reduces eye growth. (

Descriptors: ; ...PA; Cornea--physiopathology--PP; Eye--physiopathology--PP; Follow-Up Studies; Glaucoma--etiology--ET; Intraocular Pressure; **Lens, Crystalline**--surgery--SU; Postoperative Complications; Rabbits; Refraction, Ocular; Visual Acuity

Named Person:

Dialog eLink:

USPTO Full Text Retrieval Options

20/3,K/13 (Item 1 from file: 972)

DIALOG(R)File 972: EMBASE

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0076976361 **EMBASE/MEDLINE No:** 1997269563

Corneal topographic changes after frown and straight sclerocorneal incisions

Vass C.; Menapace R.; Rainer G.

University Eye Hospital, Wahringer Gurtel 18-20, A-1090 Vienna, Austria

Corresp. Author/Affil: Vass C.: University Eye Hospital, Wahringer Gurtel 18-20, A-1090 Vienna, Austria

Journal of Cataract and Refractive Surgery (J. CATARACT REFRACTIVE SURG.) (United States) September 25, 1997 , 23/6 (913-922)

CODEN: JCSUE **ISSN:** 0886-3350

Document Type: Journal ; Article **Record Type:** Abstract

Language: English **Summary language:** English

Number of References: 23

...following cataract surgery with two types of sclerocorneal tunnel incisions for implantation of 6.0 mm optic poly(methyl methacrylate) intraocular **lenses**. Setting: University Eye Hospital, Vienna, Austria. Methods: This prospective, unmasked, and

unrandomized study comprised 48 otherwise healthy eyes scheduled for cataract surgery. A 4.5 mm sutureless frown incision was made in 22 eyes and a 6.0 mm straight sclerocorneal incision with a horizontal 10-0 nylon infinity suture in 26 eyes. Preoperatively... videokeratoscope (Computed Anatomy, Inc.). The data were evaluated by batch-by-batch analyses of the **paired** differences between the records. The significance of topographic changes was calculated by **paired** Wilcoxon tests; group comparisons were made using Wilcoxon tests. Results: In **both** groups, horizontal steepening and lower corneal flattening were consistently 0.4 diopter (D). Upper peripheral... D, respectively, in the frown-incision group. Vertical flattening and horizontal steepening were significant in **both** groups ($P < .01$). Group comparisons revealed significant differences in only 15 of 225 areas ($P < .05$). Conclusion: There were no major differences between the **two incision** groups in surgically induced topographic changes.

Medical Descriptors:

*

adult; aged; article; artifact reduction; austria; capsulorhexis; clinical article; clinical trial; **controlled** study; female; human; keratometry; keratoscopy; lens implant; male; priority journal; prospective study; statistical analysis; suturing...

Orig. Descriptors:

Dialog eLink: **USPTO Full Text Retrieval Options**

20/3,K/14 (Item 2 from file: 972)

DIALOG(R)File 972: EMBASE

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0076810127 **EMBASE/MEDLINE No:** 1997103099

Inflammatory response in the rabbit after phacoemulsification and intraocular lens implantation using a 5.2 or 11.0 mm incision

Laurell C.-G.; Zetterstrom C.; Lundgren B.; Torngren L.; Andersson K.

S:t Erik's Eye Hospital, S-112 82 Stockholm, Sweden

Corresp. Author/Affil: Laurell C.-G.: S:t Erik's Eye Hospital, S-112 82 Stockholm, Sweden

Journal of Cataract and Refractive Surgery (J. CATARACT REFRACTIVE SURG.) (United States) April 21, 1997 , 23/1 (126-131).

CODEN: JCSUE **ISSN:** 0886-3350

Document Type: Journal ; Article **Record Type:** Abstract

Language: English **Summary language:** English

Number of References: 32

...the rabbit after phacoemulsification and intraocular lens implantation using a 5.2 or 11.0 mm incision

Purpose: To study the effect of **two incision** sizes, 5.2 and 11.0 mm, on the

inflammatory response in rabbit eyes after lens extraction with phacoemulsification. Setting: S:t Erik's Eye Hospital, Stockholm, and Pharmacia, Uppsala, Sweden... Bilateral endocapsular phacoemulsification was performed on 32 rabbits. The wound was enlarged to 5.2 mm, and a poly(methyl methacrylate) intraocular lens (IOL) was implanted in the capsular bag. In... eye was selected at random and the wound in that eye enlarged to 11.0 mm. In both eyes the wound was sutured with a 9-0 polypropylene E SUB 2 (PGE SUB... levels at days 1, 3, and 7 were significantly higher in eyes with 11.0 mm incisions than in eyes with 5.2 mm incisions. One week after surgery, the corneas in the eyes with 11.0 mm incisions were significantly thicker than in those with 5.2 mm incisions. Conclusion: The results indicate that incision size is an important factor in the inflammatory response...

Medical Descriptors:

*

animal experiment; animal model; animal tissue; article; **controlled** study; incision; nonhuman; priority journal; surgical technique; suturing method; treatment outcome

Orig. Descriptors:

Dialog eLink: **USPTO Full Text Retrieval Options**

20/3,K/15 (Item 3 from file: 972)

DIALOG(R)File 972: EMBASE

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0076254531 **EMBASE/MEDLINE No:** 1995293289

Astigmatic and refractive stabilization after cataract surgery

Oshika T.; Tsuboi S.

Division of Ophthalmology, Tokyo University Branch Hospital, 3-28-6 Mejirodai, Hongo, Tokyo 112, Japan

Corresp. Author/Affil: Oshika T.: Division of Ophthalmology, Tokyo University Branch Hospital, 3-28-6 Mejirodai, Hongo, Tokyo 112, Japan

Ophthalmic Surgery (OPHTHALMIC SURG.) (United States) October 19, 1995 , 26/4 (309-315)

CODEN: OPSGA **ISSN:** 0022-023X

Document Type: Journal ; Article **Record Type:** Abstract

Language: English **Summary language:** English

...assessed the timing of astigmatic and refractive stabilization following six cataract surgery procedures with intraocular lens implantation in 229 eyes divided into six groups in the following incision sizes and methods of wound closure: - 11-mm incision with running suture closure (26 eyes) - 6.5-mm incision with running suture closure (29 eyes) - 6.5-mm incision with single horizontal suture closure (25 eyes) - 6.5-mm incision without suture closure (46 eyes) - 5.5- mm incision without suture closure (51 eyes) - 3.2-mm incision without suture closure (52 eyes). Analyzed up to 6 months postoperatively were: - the mean and... cylinder vector - the spherical equivalent of the

refractive power. In the 11- and 6.5-mm incision running suture groups, these parameters did not stabilize **during** the study period. In the 6.5-mm incision horizontal suture and sutureless groups, the values stabilized at 3 months postoperatively; in the 5.5-mm incision group, at 1 month; and in the 3.2-mm incision group, at 2 weeks. These results indicate that the appropriate point at which to prescribe postoperative correction spectacles...

Medical Descriptors:

*

aged; article; **controlled** study; human; lens implant; major clinical study; postoperative period; priority journal

Orig. Descriptors:

Dialog eLink: **USPTO Full Text Retrieval Options**

20/3,K/16 (Item 4 from file: 972)

DIALOG(R)File 972: EMBASE

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0009028897 EMBASE/MEDLINE No: 2007029747C

Cyclodialysis, multiple or single, with air injection. An operative technique for chronic glaucoma

Barkan O.

American Journal of Ophthalmology (Am. J. Ophthalmol. Chicago) December 1, 1947 , 30/9 (1063-1073)

ISSN: 0002-9394

Document Type: Journal ; Article **Record Type:** Abstract

Language: English **Summary language:** English

...object of this procedure is to create a larger dialysis with less trauma and to **control** haemorrhage. The operation, performed on 83 eyes, of which 70 were primary glaucoma, resulted in... ..has not contra-indicated the use of the procedure, it appearing to be effective under **both** congested and uncongested conditions. Indeed, in the narrow-angle type and in those in a highly congestive state, cyclodialysis **combined** with air injection would appear to be the operation of choice to the exclusion of... ..trauma. Technique consists of extreme miosis pre-operatively; formation of a curved conjunctival flap, 10 mm in length extending from the VI to XII o'clock positions; exposure of the sclera... ..proper position by an assistant. The scleral incision is made with a sharp keratome 8 mm posterior to the corneoscleral border and oblique to the surface of the sclera. In cases with **two incisions**, the second is made in the upper outer quadrant in the same manner, air having... ..a 5 cc syringe, with No. 23 B-D gold cannulas attached. The air lost **during** performance of the second cyclodialysis is replaced with another injection of air that again restores... ..may be allowed to escape through a corneal puncture made with a Graefe knife, 1 mm axially to the corneoscleral border. A small air bubble (4 to 5 mm in diameter) is allowed to remain. Post-operative prophylaxis consists of 5 per cent

prostaglandin... ..prevent formation of pigment adhesions in the pupillary area, one drop of adrenaline (1:100), **combined** with one drop of euphthalmine (2 per cent) should be dropped in the eye when deemed necessary **during** the first several days of post-operative care. Dilatation of the pupil must be only...

Medical Descriptors:

*

adhesion; anterior eye chamber; aphakia; bleeding; cannula; cataract; closed angle glaucoma; contact **lens**; dialysis; exposure; **eye**; filtering operation; incision; injury; intraocular pressure; iris; lens; miosis; ointment; primary glaucoma; prophylaxis; puncture; sclera...

Orig. Descriptors:

Dialog eLink: **USPTO Full Text Retrieval Options**

20/3,K/17 (Item 1 from file: 144)

DIALOG(R)File 144: Pascal

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16801948 PASCAL No.: 04-0458657

Inflow of ocular surface fluid through clear corneal cataract incisions:

A Laboratory model

SARAYBA Melvin A; TABAN Mehran; IGNACIO Teresa S; BEHRENS Ashley; MCDONNELL Peter J

Department of Ophthalmology, University of California, Irvine, Irvine, California, United States; Wilmer Ophthalmological Institute Johns Hopkins

University School of Medicine, Baltimore, Maryland, United States

Journal: American journal of ophthalmology, 2004, 138 (2)

206-210

Language: English

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. PURPOSE: To evaluate the self-sealing properties of standard clear

corneal cataract **incisions during two** events: (1)

application of mechanical external pressure, or (2) **controlled** fluctuation of intraocular pressure (IOP). . DESIGN:

Laboratory

investigation. . METHODS: Eight fresh human donor globes were prepared for

Miyake video microscopy. A standard two-plane 3-mm clear corneal incision was created and a 3 x 3-mm sponge soaked with India ink was placed on the wound surface. One globe with a sutured corneal wound served

as the **control**. A transcleral cannula was inserted and connected to a bottle of saline. Intraocular pressure was...

Broad Descriptors: **Eye** disease; **Lens** disease; Anterior

segment disease; Oeil pathologie; Cristallin pathologie; Segment

anterieur pathologie; Ojo patologia; Cristalino patologia...

Dialog eLink: **USPTO Full Text Retrieval Options**

20/3,K/18 (Item 2 from file: 144)

DIALOG(R)File 144: Pascal

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14944412 PASCAL No.: 01-0096049

Foldable silicone versus poly(methyl methacrylate) intraocular lenses
in
combined phacoemulsification and trabeculectomy

BRAGA-MELE Rosa; COHEN Sandra; ROOTMAN David S
University of Toronto, Toronto Hospital (Western Division), Toronto,
Ontario, Canada

Journal: Journal of cataract and refractive surgery
, 2000, 26 (10
) 1517-1522
Language: English

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Foldable silicone versus poly(methyl methacrylate) intraocular lenses
in
combined phacoemulsification and trabeculectomy

... foldable silicone intraocular lenses (IOLs). Methods: Thirty
patients
were randomized to receive a 5.5 mm PMMA IOL through a 5.0 mm
incision or a foldable silicone IOL (Allergan SI-30) through a 3.2
mm incision. Visual acuity, intraocular pressure (IOP), bleb
survival, inflammation, endothelial cell changes, and complications
were
examined...

... Results: There was no difference between the 2 groups in final
visual
outcome, final IOP **control**, bleb survival, and endothelial cell
changes. Two months after surgery, there was significantly
more
inflammation...

... group than in the PMMA group ($P < .05$). The silicone group had
a
significantly higher **combined** complication rate including iris
capture, choroidal effusion, and epiretinal membrane formation (P
 $< .05$).

Conclusions: Foldable silicone IOLs were comparable to conventional
PMMA
lenses in visual outcome, IOP **control**, bleb formation, and
endothelial changes. However, some silicone lenses are associated
with an

increased risk of recurrence of inflammation and a higher final complication rate in **combined** cataract and filtration surgery.

English Descriptors: Cataract; Concomitant disease; **Combined** treatment; Glaucoma (eye); Postoperative; Intraocular pressure; Phacoemulsification; Lens; Trabeculectomy; Intraocular lens; Silicone elastomer; Methyl methacrylate polymer; Posterior chamber; Comparative study; Prognosis; Visual acuity; Complication; Iatrogenic; Human; **Combined** surgery

...French Descriptors: Methacrylate de methyle polymere; Chambre posterieure; Etude comparative; Pronostic; Acuite visuelle; Complication; Iatrogene; Homme; Chirurgie **combinee**

...Spanish Descriptors: Metacrilato de metilo polimero; Camara posterior; Estudio comparativo; Pronostico; Acuidad visual; Complicacion; Iatrogeno; Hombre; Cirugia **combinada**

Broad Descriptors: **Eye** disease; **Lens** disease; Anterior segment disease; Surgery; Oeil pathologie; Cristallin pathologie; Segment anterieur pathologie; Chirurgie; Ojo patologia...

Dialog eLink: **USPTO Full Text Retrieval Options**

20/3,K/19 (Item 3 from file: 144)

DIALOG(R)File 144: Pascal

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14522477 PASCAL No.: 00-0186668

Glaukom und Katarakt: Operation ein- oder zweizeitig?
(Coexisting glaucoma and cataract : **combined** surgery vs. trabeculectomy first and cataract extraction later?)

URBAN V; KAMMANN M T T; STUERMER J P E
Augenlinik Universitaetsspital Zuerich, Switzerland; Augenlinik
Kantonsspital Winterthur, Brauerstr. 15, 8401 Winterthur, Switzerland
Journal: Klinische Monatsblaetter fuer Augenheilkunde
, 2000, 216 (2
) 105-111
Language: German Summary Language: English

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(Coexisting glaucoma and cataract : **combined** surgery vs. trabeculectomy first and cataract extraction later?)

... aim of this retrospective study is to evaluate the difference in postoperative intraocular pressure (IOP) **control** , number of

antiglaucoma medications and visual acuity (VA) between **combined** phacoemulsification and trabeculectomy (Glaucoma triple) surgery and two-stage procedures with trabeculectomy first and cataract...

... Methods: Two groups of glaucoma patients were assessed: In group 1 50 consecutive patients undergoing **combined** phacoemulsification and trabeculectomy were enrolled. In group two, 51 consecutive patients were included, that had...

... the other 16 patients (29%) had phacoemulsification via clear cornea incision. Results: One year postoperative **both** groups revealed a significant IOP reduction. IOP-reduction was significantly better in the two-stage group one year after trabeculectomy (12.8 \pm 4.0 mm Hg) and one year after cataract extraction (14.0 \pm 2.8 mm Hg) as compared to the **combined** surgery group (15.3 \pm 4.0 mm Hg). Kaplan-Meier survival analysis revealed a 90% success-rate 12 months after trabeculectomy only as compared to 65% success-rate in the **combined** surgery group. The number of antiglaucoma medications was significantly reduced in **both** groups. One year after cataract surgery no difference in VA could be seen between the...

... two-stage procedure (i.e. trabeculectomy first, cataract extraction later) yields better long-term IOP **control**. If glaucoma is medically **controlled** with a simple regimen, conjunctiva-sparing cataract surgery may be the treatment of choice. In all other cases of coexisting glaucoma and cataract **combined** phacoemulsification and trabeculectomy (Glaucoma triple) is preferable, either performed through a single **incision** or as two separate procedures in the same session (i.e. trabeculectomy from above, phacoemulsification via clear cornea...

English Descriptors: Glaucoma (eye); Association; Cataract; **Combined** surgery; Trabeculectomy; Phacoemulsification; Dissociation; Comparative study; Intraocular pressure; Postoperative; Human

French Descriptors: Glaucome; Association; Cataracte; Chirurgie **combinee**; Trabeculectomie; Phacoemulsification; Dissociation; Etude comparative; Tonus oculaire; Postoperatoire; Homme

Spanish Descriptors: Glaucoma (ojo); Asociacion; Catarata; Cirugia **combinada**; Trabeculectomia; Facoemulsificacion; Disociacion; Estudio comparativo; Tono ocular; Postoperatorio; Hombre

Broad Descriptors: **Eye** disease; **Lens** disease; Anterior segment disease; Surgery; Oeil pathologie; Cristallin pathologie; Segment

anterieur pathologie; Chirurgie; Ojo patologia...

Dialog eLink: USPTO Full Text Retrieval Options

20/3,K/20 (Item 4 from file: 144)

DIALOG(R)File 144: Pascal

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14015207 PASCAL No.: 99-0203050

Laser phaco par le Paradigm Photon Laser : Technique chirurgicale et premiers resultats

(Laser phaco using Paradigm Photon Laser. Surgical technique and early results)

TUNC Z

Metropolitan Florence Nightingale Hospital, 80810 Gayrettepe, Istanbul,

Turkey

Journal: Journal francais d'ophtalmologie,

1999, 22 (1)

39-40

Language: French Summary Language: English

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(Laser phaco using Paradigm Photon Laser. Surgical technique and early results)

... phase Il est en cours. La technique commence comme la phaco-u

trasonique, avec une incision corneenne tunnelisee de 2,8 mm

et un capsulorhexis. On realise une hydrodissection et, surtout, une

hydrodelamination soigneuse. Le...

Broad Descriptors: Eye disease; Lens disease; Anterior

segment disease; Surgery; Oeil pathologie; Cristallin pathologie;

Segment

anterieur pathologie; Chirurgie; Ojo patologia...

Dialog eLink: USPTO Full Text Retrieval Options

20/3,K/21 (Item 5 from file: 144)

DIALOG(R)File 144: Pascal

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13920363 PASCAL No.: 99-0102087

One-site versus 2-site phacotrabeculectomy : A randomized study

EL SAYYAD F; HELAL M; EL-MAGHRABY A; KHALIL M; EL-HAMZAWAY H

El-Maghraby Eye Hospital, Jeddah, Saudi Arabia
Annual Meeting of the American Academy of Ophthalmology (Chicago,
Illinois USA) 1996-10
Journal: Journal of cataract and refractive surgery
, 1999, 25 (1
) 77-82
Language: English

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Purpose: To compare 1-site and 2-site **combined** phacoemulsification
with foldable intraocular lens (IOL) implantation and
trabeculectomy.

Setting: El-Maghraby Eye Hospital, Jeddah...

...and glaucoma were randomly assigned to have a mitomycin-C
trabeculectomy

In a superior quadrant **combined** with phacoemulsification and
foldable IOL implantation through the same incision (1-site group)
or a

separate, temporal, clear corneal **incision** (2-site group).

Postoperative evaluation included visual acuity, intraocular
pressure

(IOP), bleb assessment, and number of...

... Follow-up ranged from 12 to 18 months. Results: Mean preoperative
IOP

was 28.1 mm Hg \pm 7.1 (SD) in the 2-site group and 26.2 \pm 6.5
mm Hg in the 1-site group. At 6 months postoperatively, mean IOP was
16.9 \pm 4.3 and 16.8 \pm 3.8 mm Hg, respectively ($P = .9$) and at
12 months, 17.6 \pm 3.3 and 19.1 \pm 3.1 mm Hg, respectively ($P =$
.044). Twenty-three of 39 eyes (59%) in the 2-site group...

... months ($P = .065$). Postoperative astigmatic change and
complications

were comparable. Conclusion: Mitomycin-C trabeculectomy
superiorly

combined with separate temporal clear corneal phacoemulsification
provided 1 year IOP **control** comparable to that with single-incision
(1-site) **combined** cataract and glaucoma surgery.

English Descriptors: Phacoemulsification; Lens; Trabeculectomy;
Intraocular

lens; **Combined** treatment; Surgical incision; Cataract; Comparative
study; Glaucoma (eye); Concomitant disease; Human

Broad Descriptors: Surgery; **Eye** disease; **Lens** disease;

Anterior segment disease; Chirurgie; Oeil pathologie; Cristallin
pathologie; Segment anterieur pathologie; Cirugia; Ojo patologia...

Dialog eLink:

USPTO Full Text Retrieval Options

20/3,K/22 (Item 6 from file: 144)

DIALOG(R)File 144: Pascal

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13663691 PASCAL No.: 98-0371351

A prospective **controlled** study of a 10/0 absorbable polyglactin suture for corneal incision phacoemulsification

BAINBRIDGE J W B; TEIMORY M; KIRWAN J F; ROSTRON C K

Department of Ophthalmology, St George's Hospital, London SW17 0QT, United Kingdom

Journal: Eye : (London. 1987), 1998
, 12 (p.3A) 399-402

Language: English

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A prospective **controlled** study of a 10/0 absorbable polyglactin suture for corneal incision phacoemulsification

... To evaluate the performance of a 10/0 monofilament absorbable polyglactin suture for temporal 5.2 mm corneal incision phacoemulsification. Methods A prospective randomised **controlled** study of 49 patients undergoing phacoemulsification with a sutured temporal 5.2 mm corneal section was conducted to compare the refractive results and complications of a 10/0...

... body symptoms between the two groups. Conclusions 10/0 polyglactin sutures maintain adequate tensile strength **during** the immediate post-operative period for small incision surgery and are associated with minimal induction...

... tying technique. 10/0 monofilament polyglactin is an attractive option when a suture is required **during** small incision cataract surgery.

Broad Descriptors: **Eye** disease; **Lens** disease; Anterior segment disease; Surgery; Eye; Oeil pathologie; Cristallin pathologie;

Segment anterieur pathologie; Chirurgie; Oeil...

Dialog eLink:

USPTO Full Text Retrieval Options

20/3,K/23 (Item 7 from file: 144)

DIALOG(R)File 144: Pascal

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13339595 PASCAL No.: 98-0065996

Ergebnisse nach kombinierter Phakoemulsifikation und Trabekulektomie ueber Tunnelschnitt und alleiniger Goniotrepation

(Results of **combined** phacoemulsification and trabeculectomy through scleral tunnel incision and goniotrephination alone)

GAREIS O; WAGNER P; LANG G
Universitaets-Augenklinik Ulm, Germany
Journal: Klinische Monatsblaetter fuer Augenheilkunde
, 1997, 211 (6
) 359-362
Language: German

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(Results of **combined** phacoemulsification and trabeculectomy through scleral tunnel incision and goniotrephination alone)

Purpose We retrospectively evaluated the results of **combined** phacoemulsification and trabeculectomy through scleral tunnel incision in

comparison with those of goniotrephination alone. Patients and methods 27

eyes of 20 patients (78.3 \pm 7.45 years) underwent a **combined** trabeculectomy and phacoemulsification with IOL-implantation (PT-group).

The trabeculectomy was performed by **excision** of 2 mm middle part of the lower tunnel lip. In comparison with the TP-group 29 eyes...

... a goniotrephination (Fronimopoulos), (G-group). The median of follow up was 8 weeks. Results In **both** groups a significant reduction of the IOP was achieved: in the PT-group the IOP...

... PT-group underwent a secondary surgery and 7 (=24%) of the G-group.

Conclusions The **combined** phacoemulsification and trabeculectomy is a successful method of IOP control and visual rehabilitation. Due to the decrease of visual acuity and a higher frequency of secondary surgery

after goniotrephination alone the **combined** procedure should be preferred even in presence of a moderately visual acuity reducing cataract.

English Descriptors: Cataract; Glaucoma (eye); Phacoemulsification; Trabeculectomy; **Combined** surgery; Surgical incision; Sclera; Comparative study; Trephination; Iridocorneal angle; Treatment; Human

French Descriptors: Cataracte; Glaucome; Phacoemulsification; Trabeculectomie; Chirurgie **combinee**; Incision chirurgicale; Sclerotique; Etude comparative; Trepanation; Angle iridocorneen; Traitement; Homme; Tunnelisation

Spanish Descriptors: Catarata; Glaucoma (ojo); Facoemulsificacion; Trabeculectomia; Cirugia **combinada**; Incision quirurgica; Esclerotica; Estudio comparativo; Trepanacion; Angulo iridocorneal; Tratamiento; Hombre

Broad Descriptors: **Eye** disease; **Lens** disease; Anterior segment disease; Surgery; Oeil pathologie; Cristallin pathologie; Segment

anterieur pathologie; Chirurgie; Ojo patologia...

Dialog eLink:

USPTO Full Text Retrieval Options

20/3,K/24 (Item 8 from file: 144)

DIALOG(R)File 144: Pascal

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12977589 PASCAL No.: 97-0255431

Focused Electromagnetic Field cataract surgery (FEFCS)

FUGO R J; MCGRANN D J; COCCIO D; CONWELL R D; DELCAMPO D M

Fugo Eye Institute, Norristown, Pennsylvania, United States; Fugo Eye Institute, King of Prussia, Pennsylvania, United States; Fugo Eye Institute

, Bridgeport, Pennsylvania, United States; Fugo Eye Institute, Spring City/Royersford, Pennsylvania, United States

Journal: Annals of ophthalmology. Glaucoma, 1997, 29 (1)

11-18

Language: English

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... microelectrode tip designed for eye surgery. This tip transduces the system power wave into a **controlled** electromagnetic field. Our system replaces capsulorhexis with Focused Electromagnetic Field (FEF)

Capsulotomy and phacoemulsification with FEF Nuclear Fragmentation.

During these procedures, an incisional corridor of an electromagnetic wave is focused out to 100 microns...

... easily fragment the most mature nuclei into 30 to 50 microchunks of nuclear material. The **combined** time for FEF Capsulotomy and FEF Nuclear Fragmentation is approximately 2 minutes and requires an **incision** of less than 2 mm. The FEFCS system also contains a Posterior Capsule Proximity Detection Sensor (PCPDS), which electronically senses...

... from the lens bag using a large port irrigation/aspiration unit. FEFCS

requires a corneal **incision** of 2 mm or less and will reduce surgical time for cataract by more than 50%. FEFCS may...

Broad Descriptors: **Eye** disease; **Lens** disease; Anterior segment disease; Oeil pathologie; Cristallin pathologie; Segment anterieur pathologie; Ojo patologia; Cristalino patologia...

Dialog eLink:

USPTO Full Text Retrieval Options

20/3,K/25 (Item 9 from file: 144)

DIALOG(R)File 144: Pascal

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12807284 PASCAL No.: 97-0020831

Comparison of phacoemulsification and planned extracapsular extraction

OHRLOFF C; ZUBCOV A A

University Eye Hospital, Frankfurt am Main, Germany

Journal: Ophthalmologica : (Basel),

1997, 211 (1) 8-12

Language: English

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...ECCE can opener or letter box technique is usually done. The length of the sclerocorneal **incision** is 3.2 mm in phaco, 6.2 mm for a PMMA posterior chamber lens implantation and 9-13 mm for the ECCE. We prospectively compared **both** procedures with each group including 100 consecutive patients. The mean irrigation volume was 96.6...

... Except for the astigmatism, our study could not detect significant differences regarding the outcome between **both** procedures. There are advantages to the phacoemulsification procedure, however, such as a smaller incision (e.g. tunnel technique), a closed irrigation-aspiration system, **controlled** intraocular pressure and the more frequent use of capsulorhexis. Preferred indications are zonulolysis or previously...

Broad Descriptors: **Eye** disease; **Lens** disease; Anterior segment disease; Surgery; Oeil pathologie; Cristallin pathologie; Segment

antérieur pathologie; Chirurgie; Ojo patologia...

Dialog eLink:

USPTO Full Text Retrieval Options

20/3,K/26 (Item 1 from file: 95)

DIALOG(R)File 95: TEME-Technology & Management

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00929904 F95106072941

An artificial trabeculum (MESH) for glaucoma surgery

(Ein kuenstliches Trabekulum (MESH) zur Glaukomchirurgie)

Jallet, V; Parel, J-M; Matsui, T; Kato, H; Lee, W; Haefliger, I; Sasoh, M; Budenz, D; ua
Univ. of Miami, USA; Univ. of Paris, F; Fukuoka Univ., J; Basel Univ. Augenlinik, CH;
u.a.

Ophthalmic Technol. V, Proc., San Jose, USA, Feb 4-5, 1995 , 1995

Document type: Conference paper **Language:** English

Record type: Abstract

Abstract:

...made of thin porous poly(tetrafluoroethylene) (PTFE). An instrument allows its intrascleral insertion via a **2 mm** wide conjunctival **incision** with the MESH's head protruding in the anterior chamber's angle. Flow was assessed...

Descriptors: IMPLANTS; GLAUCOMA; MEDICAL OPERATIONS; ANIMAL EXPERIMENTS; **EYE**; CYTOCOMPATIBILITY; **CRYSTALLINE LENS--**

Identifiers:

NPL FULL-TEXT

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? ds

Set	Items	Description
S1	197658	(INCISION? OR EXCISION? OR CUT OR CUTS OR CUTTING OR SLIT OR SLITS) (3N) (TWO OR 2 OR DUAL OR MANY OR TWIN OR MORE()THAN()ONE OR MULTI OR MULTIPL? OR PAIR OR DUO OR COUPLE OR DOUBLE OR DUPLICATE)
S2	11681	LENS?(3N) (EYE OR EYES)
S3	991	CRYSTALLINE?(2N) LENS?
S4	9864822	CONTROL? ? OR CONTROLER? ? OR CONTROLL??? OR (CONTROL OR GOVERN??? OR REGULAT???) (3N) (SYSTEM? ? OR SOFTWARE OR PROGRAM? ? OR

APPLICATION? ? OR APP OR APPS OR INTERFACE? ? OR MODULE? ? OR COMPUTER?
?)

S5 8374 SURGICAL? (3N) (LASER? ? OR LIGHT() AMPLIFY? OR GRASER OR
(GAMMA OR X()RAY) (2W) (LASER OR KNIFE OR KNIVES) OR
OPTICAL(3N)QUANTUM()GENERATOR OR SOLID()LASER OR (GAMMA()RAY OR
LIGHT())AMPLIFICATION(2W)STIMULATED()EMISSION)

S6 552494 MM OR MILLIMETER? OR MILLIMETRE?

S7 30467308 SIMULTANEOUS? OR TOGETHER OR AT()ONCE OR CONCURRENT? OR
SAME() (TIME OR INSTANT OR MOMENT) OR COINCIDENT?? OR COINSTANTANEOUS OR
SYNCHRONI? OR SYNCHRONO? OR COLLECTIVE?? OR EN()MASSE OR SET OR BUNDLE
OR PACKAGE OR PAIR??? OR COUPL??? OR COMBIN??? OR AGGREGAT??? OR
AGGRAGAT??? OR BOTH OR DURING

S8 12 S1(10N)S2

S9 2 S1(10N)S3

S10 12332 S2 OR S3

S11 9 S10(10N)S5

S12 128 S10(10N)S6

S13 5 S12(10N)S7

S14 0 S12(10N)S4

S15 28 S8:S9 OR S11 OR S13

S16 19 RD (unique items)

S17 8 S16 NOT PY>2004

S18 14 S10(10N)S1

S19 21 S17 OR S18

S20 16 RD (unique items)

S21 8 S20 NOT PY>2004

? t s21/3,k/1-8

21/3,K/1 (Item 1 from file: 16)

DIALOG(R)File 16: Gale Group PROMT(R)

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07618293 **Supplier Number: 62791224 (USE FORMAT 7 FOR FULLTEXT)**

Eye strain.(Bausch & Lomb)(Brief Article)

Moukheiber, Zina

Forbes , p 58

Oct 4 , 1999

Language: English **Record Type:** Fulltext

Article Type: Brief Article

Document Type: Magazine/Journal ; General Trade

Word Count: 855

Supplier Number: (USE FORMAT 7 FOR FULLTEXT)

Text:

...synonymous years ago with quality optics, to supply the
ophthalmologic market with a gamut of eye care products: contact

lenses, lens solutions, eye drops, surgical lasers. "It's one-stop shopping," says the 46-year-old chairman.

21/3,K/2 (Item 1 from file: 148)
DIALOG(R)File 148: Gale Group Trade & Industry DB
(c) 2010 Gale/Cengage. All rights reserved.

06181383 **Supplier Number: 13244146 (USE FORMAT 7 OR 9 FOR FULL TEXT)**
Technology advances merge operations and information; selected offerings from recent production technology innovations prove high tech is no longer just a buzzword.

Snyder, Robert E.
Ocean Industry , v27 , n9 , p35(10)
Nov , 1992
ISSN: 0029-8026

Language: ENGLISH

Record Type: FULLTEXT

Word Count: 7257 Line Count: 00599

...and flame position measurements. The explosion within the box is being filmed through a fish-eye lens using both video and a 35-mm camera.

By year-end 1992, a validated implementation of the model will be available to...

21/3,K/3 (Item 1 from file: 149)
DIALOG(R)File 149: TGG Health&Wellness DB(SM)
(c) 2010 Gale/Cengage. All rights reserved.

02939995 **Supplier Number: 99272238 (USE FORMAT 7 OR 9 FOR FULL TEXT)**
Bimanual microphacoemulsification: the next phase? Technique may be another step to enhance surgical procedure for patients. (Under development).

Hoffman, Richard S.; Packer, Mark; Fine, I. Howard
Ophthalmology Times , 28 , 6 , 48
March 15 ,
2003

Publication Format: Magazine/Journal

ISSN: 0193-032X

Language: English

Record Type: Fulltext Target Audience: Professional

Word Count: 1857 Line Count: 00159

...thermodynamic accommodating IOL. It is a hydrophobic acrylic rod that can be inserted through a 2-mm incision and expands to the dimensions of the natural crystalline lens (9.5 mm x 3.5 mm). A 1-mm version of this lens is...

Dialog eLink:

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21/3,K/4 (Item 1 from file: 15)

DIALOG(R)File 15: ABI/Inform(R)

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01891003 05-41995

Eye strain

Moukheiber, Zina

Forbes v164n8 pp: 58-60

Oct 4, 1999

ISSN: 0015-6914 Journal Code: FBR

Word Count: 912

Abstract:

...synonymous years ago with quality optics, to supply the ophthalmologic market with a gamut of eye care products: contact lenses, lens solutions, eye drops, surgical lasers. Carpenter's most significant move was the sale in June of the sunglass division, which...

Text:

...synonymous years ago with quality optics, to supply the ophthalmologic market with a gamut of eye care products: contact lenses, lens solutions, eye drops, surgical lasers. "It's one-stop shopping," says the 46-yearold chairman.

When Carpenter arrived at Bausch...

21/3,K/5 (Item 1 from file: 635)

DIALOG(R)File 635: Business Dateline(R)

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0114726 89-38687

Allergan Inc. Receives Approval to Market PhacoFlex Intraocular Lens

Battin, B. Norris; D'Eliscu, Jeff
Business Wire (San Francisco , CA , US) s 1 p 1
Publication Date: 891101
Word Count: 406
Dateline: Irvine, CA, US

Text:

...designed for use in a new small-incision cataract surgery technique called SingleStitch.

SingleStitch surgery **combines** the use of a small (3.5 - 4.0 mm) incision; removal of the cataract, or clouding natural **lens** of the **eye**, through use of an ultrasonic procedure known as phacoemulsification; followed by insertion of the PhacoFlex...

21/3,K/6 (Item 1 from file: 636)
DIALOG(R)File 636: Gale Group Newsletter DB(TM)
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03253066 **Supplier Number:** 46674897 (USE FORMAT 7 FOR FULLTEXT)

Distributors Available: Anesthetic, medical, ophthalmic, surgical instruments -
Firm seeks full line

Healthcare Technology & Business Opportunities , v 17 , n 9 , p N/A
Sept 1 , 1996

Language: English **Record Type:** Fulltext

Document Type: Newsletter ; Trade

Word Count: 102

Supplier Number: (USE FORMAT 7 FOR FULLTEXT)

Text:

...dental, ophthalmic and anesthetic instruments and equipment for distribution in Belarus. Equipment sought includes ophthalmological **lasers** and diagnostic equipment; **surgical lasers**; automatic equipment for production of plastic **eye lenses** and material for those lenses; ophthalmology suture material, and equipment for anesthesia and intensive care...

21/3,K/7 (Item 2 from file: 636)
DIALOG(R)File 636: Gale Group Newsletter DB(TM)
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03108175 **Supplier Number:** 46354558 (USE FORMAT 7 FOR FULLTEXT)

Distributors Available: Anesthetic, medical, ophthalmic, surgical instruments

Healthcare Technology & Business Opportunities , v 17 , n 5 , p N/A

May 1 , 1996

Language: English **Record Type:** Fulltext

Document Type: Newsletter ; Trade

Word Count: 97

Supplier Number: (USE FORMAT 7 FOR FULLTEXT)

Text:

...dental, ophthalmic and anesthetic instruments and equipment for distribution in Belarus. Equipment sought includes ophthalmological **lasers** and diagnostic equipment; **surgical lasers**; automatic equipment for production of plastic **eye lenses** and material for those lenses; ophthalmology suture material, and equipment for anesthesia and intensive care...

21/3,K/8 (Item 1 from file: 47)

DIALOG(R)File 47: Gale Group Magazine DB(TM)

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04469197 **Supplier Number:** 18166716 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Your basic eyepiece set. (includes related article on cleaning eyepieces)

MacRobert, Alan; Pepin, M. Barlow

Sky & Telescope , v91 , n4 , p38(6)

April , 1996

ISSN: 0037-6604

Language: English **Record Type:** Fulltext; Abstract

Word Count: 3241 **Line Count:** 00245

...a white reflection indicates an uncoated surface. The only white reflections we saw were from **both** sides of the **eye lens** of the Edmund RKE 28-mm. Indeed, its light throughput tested lower than the rest.

Every maker seems to follow a...